THE BUILDER

A RECORD OF ARCHITECTURE AND CONSTRUCTION.

VOL. CXII.—No. 3857. JANUARY 5, 1917.

THE CLIMAX.

THE year which is past has been marked by the widening of the area affected by war and the entry of fresh combatants into the struggle. Napoleon waited at Moscow for overtures of peace from the Emperor Alexander. Germany and her Allies have gone further in expressing directly and indirectly their wish for peace, but, like Napoleon, have to learn the lesson that the over-running of territory does not necessarily bring peace nearer. The swaying conflicts of 1916 proved that neither side had sufficient strength to secure decisive victory, and the world now awaits the result of the struggles of 1917. We hope and believe that in the year which is with us the modern Armageddon may be ended by decisive victory for the Allies, and that the evil genius of Prussia will be definitely and finally exorcised and cease to be a factor making for the promotion of strife among the European family of States, each of which will, it is to be hoped, be given the boundaries to which it is justly entitled on racial and national lines. For the moment every State in Europe outside the narrow limits of the neutral States has subordinated all lesser considerations to the task of waging war efficiently, and our Government and those of our Allies have been reformed with that sole object. Naturally the culminating stages of war have involved more and more interference with normal industries and the occupation of all classes, and in none is this more the case than with the great industry of building, which, with the exception of works necessary for the prosecution of war and the completion of a certain number of contracts under conditions of abnormal difficulty and delay, has been very greatly diminished.

The general conditions of labour in the country have been unusually favourable to wage-earners, to whom war has brought undreamed-of prosperity which it is to be hoped will be rendered permanent on the conclusion of peace. Classes hitherto divided by a supposed antagonism of interests have been drawn together through the agency of their common service of the State, and it remains for wise statesmanship to utilize the discovered strength given by union when peace returns. In return for the scrapping of the obsolete fallacy of the limitation of output Capital can concede much, and with these and other changes made permanent we can look forward with confidence to a great period of commercial prosperity in which the building trades will have their share. The losses due to war among both architects and contractors have been heavy, for, in common with every section of the community, they have responded to the national call, and it will remain for those who live to add their share to what the undying dead have done to bring about a happier world in the years to come.

Two public buildings of the first importance have been carried on slowly, owing to circumstances, but continuously, and they are both buildings which carry with them happy omens and are among the most successful contributions which have been made to the sum of modern design. We refer to the Port of London Offices and the new Australian Commonwealth building. Both have an intimate connection with the future, and each in its way is an expression of belief in the greater destinies of Britain. The various authorities which dealt with shipping in the first port of the world have given place to the Port of London Authority, which, with wise foresight, is laying the foundations of a greater future than London has ever had, and are determined that nothing which the skill of man can devise shall be wanting to make the facilities of London as a port the greatest in the world. The Australian Commonwealth Offices are an outward and visible sign of the close union of our great Dominions with Great Britain, and the fact that they have been carried on in war shows the world that we are confident of our great future and determined to provide for it. The County Hall and the new Water Board Offices have been for the time stopped, but, although important and necessary to the community, their completion is secondary in importance to those of the two buildings already mentioned. Among a small number of buildings which have been completed in the year is the new Marylebone Town Hall, which forms an addition to our Metropolitan buildings much needed in a district somewhat wanting in architectural character. They are among the most successful public buildings of the day and are marked by dignity of treatment and refinement in detail.

The building trade has been definitely assured that the clauses in the recent land legislation, which have penalized enterprize and stopped building, will be eliminated, and as soon as this promise is fulfilled contractors will be found willing to continue their activities, through the exercise of which most of the housing of the people has been effected in the past. As it is in the power of local authorities to employ competent advisers and make what restriction they like, there is not the smallest reason why private enterprize should involve ugly or badly built houses or for the socialistic assumption that the State should act *in loco parentis* on this or other matters. The business of the State, rightly considered, must be largely negative, that of fixing the limits within which individuals may exercise their initiative without infringing the rights of others, a conception often overlooked by social enthusiasts.

There has been a great deal of loose talking as to the lessons of the war, and we are continually hearing the expression "self-indulgence, luxury, and extravagance" made use of in arguments. In reality what has been wanting here has been a habit of clear and logical thought about big issues, and action based on the results of thought. If we choose to work with one-third of the horse power used in America in similar trades, it will not suffice to put down our smaller production to the fault of the British workman, nor shall we materially increase our native food production by planting fruit trees in public parks. It is even doubtful whether greater efficiency is shown by examining season tickets at both ends of a non-stop journey. We shall show slothfulness in clear thinking if we trust to the decisions of a Hague Conference to save us from future wars. What is wanted is more of that most uncommon quality of "common sense."

The award for a new Town Plan for Dublin, which we deal with elsewhere, will lead, it is to be hoped, to a great reconstruction of one of the most beautiful of our eighteenth century towns, and to the provision of improved housing where it is urgently needed, while the reconstruction of Sackville-street should give an opportunity for the display of architectural talent. The controversy arising out of the question of Charing Cross bridge has revealed a welcome change—public interest in the improvement of London. It is clearly recognised that a private company's interests must not be considered as paramount where public convenience is concerned, and, thanks to the able advocacy of the public-spirited, it may be assumed that a great improvement will be carried out in the near future whether the company are allowed to strengthen the existing railway bridge for the present or not. The important Congress convened by the National Housing and Town Planning Association in the spring did much useful work, and on all sides there is evidence that those interested in building and in what is called "welfare work" are thinking out problems which will demand attention in the period "after the war," which we hope will be reached within the next twelve months through the gates of a peace giving effect to the principles for which we and our allies are now in arms.

NOTES.

Employers' New Duties.

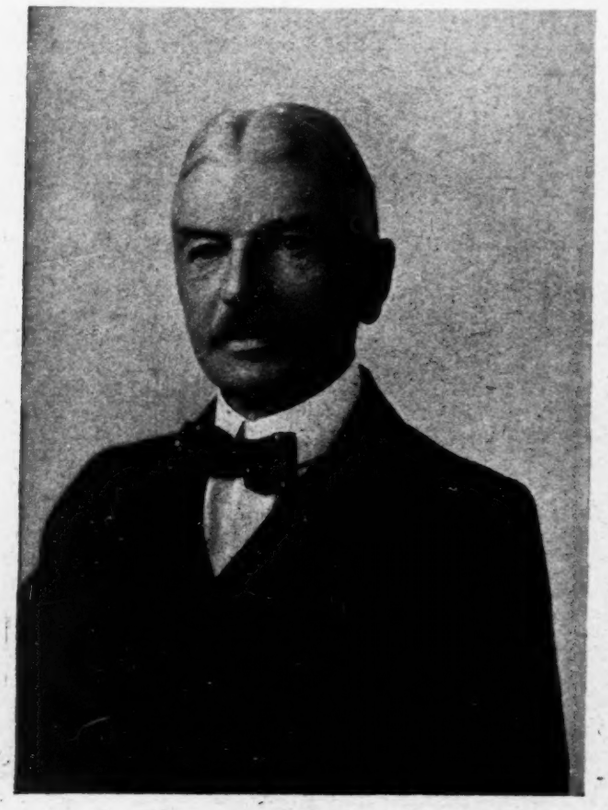
THE responsibilities laid upon those who employ labour at the present time are manifold and far-reaching. Employers must not only make lists of their employees, but keep such lists up to date, and, on employing a new man, must furnish the nearest recruiting officer with particulars in writing concerning him. It is also an offence against the Defence of the Realm regulations for an employer to communicate with a former employee who is serving in his Majesty's Forces with a view to induce him to try to obtain his discharge, so that he may take up his former work. In curious contrast with these drastic regulations is the tenderness shown to the conscientious objector. We should like to see the conscientious objector bowled out; we really don't think he would be missed!

Liability of Highway Authorities.

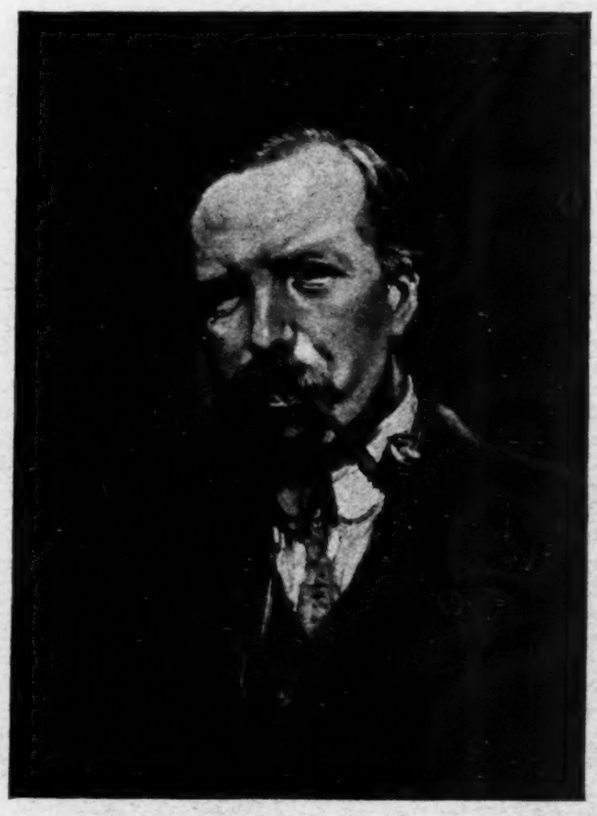
AN important point seems to have been decided in the recent case Nash *v.* Rochford Rural District Council, at present only briefly reported (the *Weekly Notes*, December 23). An action had been brought by the plaintiff for damages in respect of injuries sustained by his pony on a highway. The Jury had found that the accident was caused through the negligent manner in which a drain had been constructed, owing to which the crust of the road had been sucked or washed away. The plaintiff had been unable to prove what he had alleged, that this drain had been constructed by the defendant Council, and the Court of Appeal had refused to allow further evidence to be given before them on this point. It appears therefore to have been assumed that the drain must have been constructed by some of the defendant's predecessors in title: that would be the various road authorities, *i.e.*, from 1835 to 1863 the parish surveyors under the Highway Act, 1835; from 1863 to 1881 a highway board under the Highway Act, 1862; from 1881 to 1895 the parish surveyors; and from that date the present authority. The Court of Appeal hold that, as a highway authority are only liable for acts of misfeasance and no action for misfeasance could be brought until the damage accrued, assuming a former authority to have been guilty of misfeasance, no liability had attached to them which could pass on to their successors either under section 25 of the Local Government Act, 1894, or any of the Acts by which the succeeding authorities were created. The law as to the liability of local authorities is not very satisfactory, and the distinction between nonfeasance and misfeasance is too academic for practical purposes. In the present case it is not clear whether the defect by which the pony put his foot through the crust of the road was apparent or not; if it were apparent it would only seem reasonable that the highway authority should be liab e for leaving a road in a dangerous condition, but on the decided cases it would still be arguable whether the neglect to remedy the defect was an act of nonfeasance or misfeasance. This question did not arise in the case, as all that is decided is that the existing authority is not liable for an act of mi-feasance committed by its predecessor in title.

Strikes and the Labour Ministry.

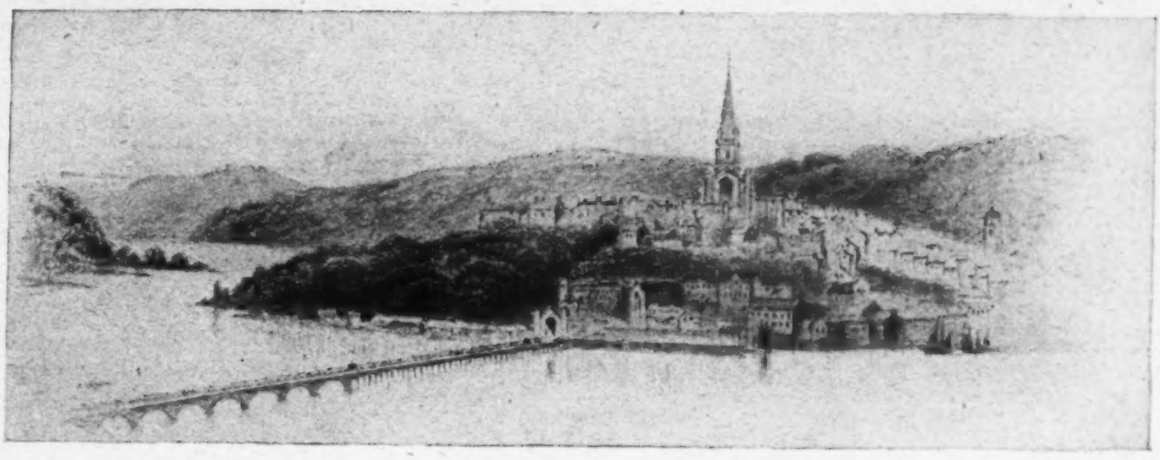
WITH the formation of a new Government which has already taken steps to create a Ministry of Labour, and thus to carry out a reform which was placed in the forefront at the Trade Union Congress, it is to be hoped that practical results may be obtained in settling disputes between employers and employed without resorting to a cessation of work. The Prime Minister, in his brief reference to this new Department, pointed out that its creation was fulfilling a demand that organised labour had been urging for the last 30 years, and he expressed the hope that the new Department would not confine itself merely to settling disputes, but no one can be more alive than Mr. Lloyd George to the disastrous effects of disputes, especially at a time when steps are being taken to organise the whole strength of the nation to meet a crisis in its existence. Taking the two years of war, 1915 and the eleven months of 1916, a period during which every idle hand and every idle hour may have tended to prolong the war, it is distressing to find that the loss in working days, owing to disputes, has been in 1915 2,866,200 working days, and in 1916, 2,400,800. If Nero has been condemned by posterity for fiddling whilst Rome was burning, what will be said of a nation fighting for existence, which can lose millions of working days over mere questions of money, or as to the employment of certain persons or their dismissal? Food prices have risen, but so have wages; the net result of changes in rates of wages in the eleven months of this year shows an increase of over half a million, excluding many classes such as seamen, agricultural labourers, railway servants, &c., and those in employ do not feel the pinch like those on small fixed incomes, but this is not a time to balance whether increased wages exactly equal increased prices, or who is suffering most; the one thing to resolve is that we will neither down tools nor arms whilst a common enemy is knocking at the gates. Real prosperity can only come with a real peace, and with a real peace we trust that the Labour Ministry may have opportunities, with the rest of the nation, of establishing improved conditions in our domestic and economic life, and of fostering and garnering the fruits of victory



Mr. Kaye-Parry, Architect.
President, Royal Institute of the Architects of Ireland.



Mr. W. A. Orpen, R.H.A.
Past President of the R.I.A.A.
(From a painting by W. Orpen, R.A.



A View of Londonderry, from an old print.

SOME IRISH IMPRESSIONS.

THE insular position of Great Britain has proved an almost unmixed advantage to its people, protecting them from invasion and other evils inherent to a less isolated position; and England has always absorbed its conquerors since the legions of Rome were forced to leave these shores. The Dukes of Normandy became Kings of England only to rule Normandy from England and finally to lose their hold on the Continent of Europe, while the Continental possessions of our later kings melted away, leaving Great Britain the freest, and also the most insular, of the peoples of the earth.

But analogous conditions in Ireland have operated to its disadvantage, for it has been too near other lands to be immune from attack, and too far from Great Britain to be either thoroughly understood, or to share equally and fully in the amelioration of conditions due to growing civilisation. Ireland has, in the past, suffered most of the disadvantages of political connection with another country, and reaped very few of the advantages of that connection.

Its golden epoch was in the early centuries of the Christian era, and though myth and legend may exaggerate the prosperity of that time, the remains of buildings all over Ireland, as well as the records of early writers, show that, in the ages after St. Patrick had converted its people, prosperity and the comparative state of its civilisation made Ireland an oasis among the rude and warring peoples of Western Europe.

Since the fifth century its lot has been a troubled one, and from the far-distant days when the Danes first harried the Irish coast, to be followed by the Anglo-Normans, down to the days of the Penal Laws, it has been, with brief intervals, a distressful country. The narrow seas, too slight a bar for protection, have seemed to interpose a barrier preventing successive governors from understanding the necessity for justice and settled government, so essential to the prosperity of any State. It was a political misfortune that a country which did not accept the Reformation should be yoked in unequal harness with one which did; while the Settlement of Ulster, which brought commercial prosperity to a portion of the country, tended, in many ways, to complicate the political situation.

The injustice of an unenlightened epoch tended to prevent the springing up of a national prosperity which would have ameliorated a difficult position, nor can the justice and liberality in the present be expected to speedily efface the national results of the misgovernment of centuries.

It is natural that the Irish should attribute recent legislation to the efficiency of agitation rather than a determination to act justly, and that they should support a political party whose policy many dislike, possibly attributing to its activities more than is justified by fact.

What Ireland wants in the present, as it has wanted in the past, is just government having a continuity of purpose and tradition, but it is more than possible that even under such circumstances it would take many decades to wipe out the memory of an unfortunate past.

Ireland must, in many senses, seem a foreign land to us. We miss the country villages and churches of England, and its frequent old houses, though there are far fewer traces of the suburban agglomerations of building which are the rule rather than the exception in many parts of England. The frequency of ruined remains, and the wide gap of time which separates them from the eighteenth century to which so much of the architecture of Ireland belongs, is symptomatic of Ireland's sufferings through ages of lawless unrest. The immense number of new churches and cathedrals built since the repeal of the Penal Laws is a striking indication of the hold which the ancient Catholic Church has on her people, and it is more remarkable when we remember that such buildings have been erected in a country which, compared with England, is poor and undeveloped. Political intolerance and religious friction are bound to die hard in a country which has for centuries suffered from the effects of both, nor is it reasonable to expect the mass of people to have an overwhelming admiration for the benefit of British rule which has, until recent years, been synonymous with the withholding of the most elementary principles of justice from the bulk of the population. Just and sympathetic government conceived on lines preventing the creation of privileges would, if persevered in, bring content to a country which has never had a continuance of it for a full century, if we except the early, and partially legendary, accounts which have come down to us.

The architecture of a country is closely related to its history, and circumstances have, in Ireland, prevented the springing up of a great commercial middle class which has elsewhere continued architectural traditions after the age of feudalism.

There is a broad gap in the architectural records of Ireland, which may almost be said to extend from the time of the early civilisation (which is represented by the ruins to be met with everywhere) down to the eighteenth century, when Ireland enjoyed a comparative peace and a modified prosperity during which most of the best buildings were erected in its towns.

The era of Elizabeth, so prosperous in England, was marked by great rebellions which converted whole tracts of country into devastated wastes. The English Revolution, so bloodless here, was a period of war in Ireland; and when the surrender of Limerick again brought peace it was purchased at the cost of the exile of many of the best of the people. Trade jealousy completed the ruin brought by war; and the interests of the English and Scotch settlers in Ulster, who were to form the bulwark of British power, were sacrificed to preserve the manufacturers of Great Britain from a competition which they feared.

The building of the eighteenth century was the work of a small aristocracy whose position was secured by the Penal Laws, and, until the repeal of those laws, it was practically impossible for the bulk of the people to pursue the arts which are the outcome of stable circumstances making for prosperity. Ireland is predominantly agricultural, and the people have an attachment to the soil rather than to what has been built upon it.

To a great extent, therefore, the buildings of Ireland are divided into three groups—the ancient remains which, it may be said, belong to archæology rather than to architecture; the eighteenth-century renaissance; and then, after another and much shorter interval, the new buildings which are springing up in a land which has received, after years of agitation, an unusually wide charter of land enfranchisement. Like all countries where the historical continuity of architectural development has been rudely broken by external events, architecture has suffered in the process, and even more leeway remains to be made up in Ireland than in England and Scotland.

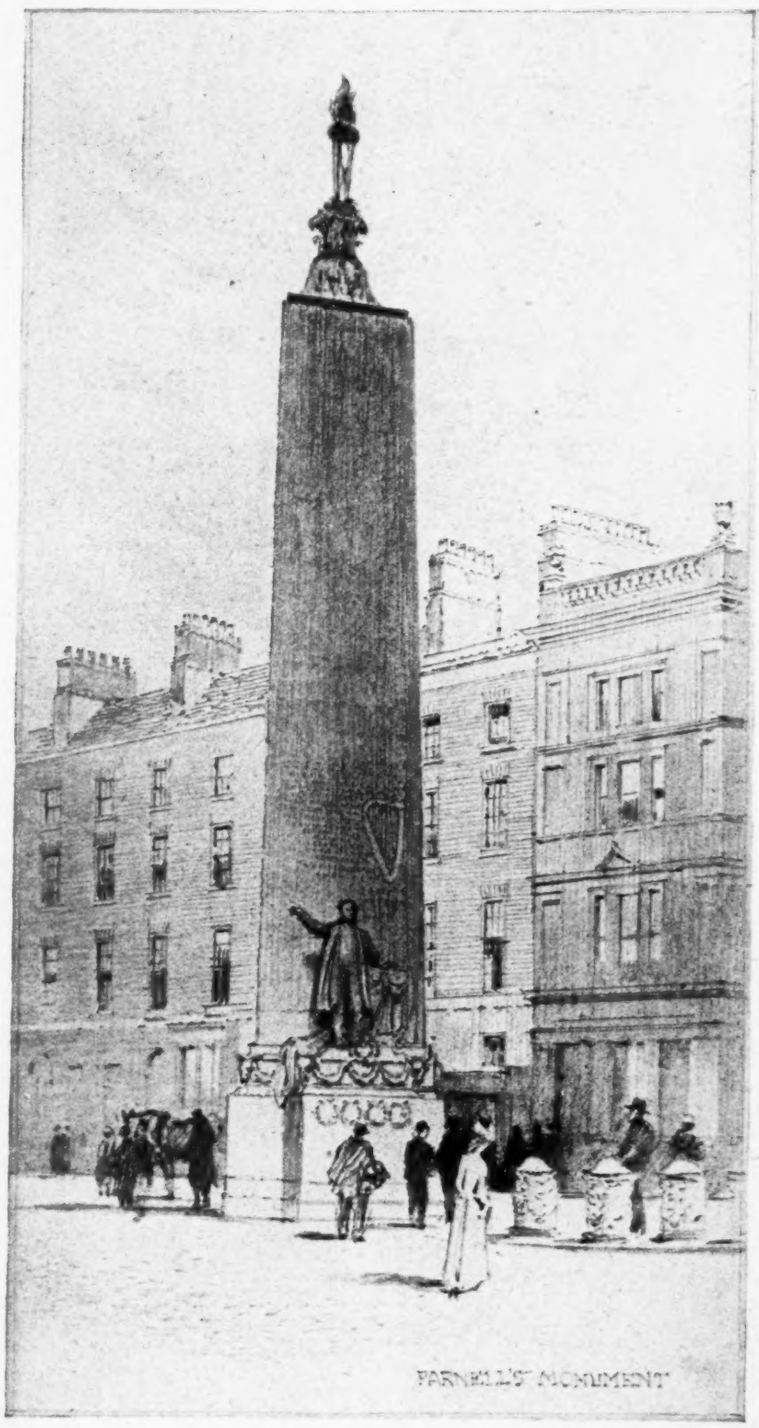
The necessity for building should promote its improvement and the development of style, and, in this respect, Ireland offers a promising field. Our old parish churches and cathedrals in large measure suffice for present wants, but as the very much smaller number of old churches belong to the Protestant Episcopal Church, the Catholic community everywhere are providing for their present wants, and an epoch of church building is the result, of which we have no parallel here. This should encourage a great renaissance of ecclesiastical architecture brought into conformity with new conditions, but it is to be regretted that a large bulk of the modern church building of Ireland is still confined in the swaddling clothes of the Gothic Revival. We have suffered from the same evil in England, but under our best architects we are escaping from the conviction that it is necessary to reproduce forms in order to convey the spirit of Gothic, and the great cathedral now being erected in Liverpool, as well as the works of Bentley, Bodley, and others show that we have learnt to look into the meaning of form and structure, the only means through which advance in design is possible. The ecclesiastical furnisher still holds sway in Ireland, and his work is inimical to the interests of the greatest of the arts. The phase of design based on a study of the old Celtic architecture of Ireland, distinctly and characteristically indigenous, is an interesting modern development which may lead to the growth of new vigour and life in modern church building, and possibly the creation of a new type of round-arched churches in Ireland.

The advances made by Government to agriculturists for the erection of cottages and farm buildings are evidenced in multitudes of slate-roofed square buildings in every part of

the country, which, though a distinct advance in the interests of health and sanitation, are unfortunate from an æsthetic standpoint; but here again we are on the threshold of a new epoch, and the influence of activity should, before long, be a factor in the growth of suitable rational æsthetic expression.

The better housing of the poorer classes in the towns is everywhere attracting attention, and, besides the large schemes on foot for clearing away slums in Dublin, good work is being carried out in many Irish centres which should give useful employment to architects and builders, and stimulate architectural expression.

The great towns of Ulster, the seats of important ship-building industries and the manufacture of linen, the only trade which has not been systematically discouraged in the past, have always seemed to be allied to the manufacturing districts of England and Scotland rather than to Ireland. It is said in Belfast that that great city is more closely bound to Glasgow and other centres of the United Kingdom than to Ireland, but it would not be singular if, when the political separation of the "Six Counties" took place, they found themselves to be more "Irish" in sentiment than they had ever been before. The greatest blessing for a country is the maintenance of order and the administration of justice, though the government which brings it about may fail to earn the approval of partisans of any school of political thought.



The Parnell Monument, Dublin.

Nature has made Ireland a land of vivid colour and contrasts of wild mountainous scenery, great lake-fed rivers, and fertile plains, the richest grazing country in the world. Free trade has discouraged the growth of wheat, former Governments the setting up of manufactures, for which there is ample scope, since, though the coal measures are almost undeveloped there are unusual natural means given by abundant internal waterways for the creation of electrical energy. If the lessons of the past teach wisdom in the future, there is no reason why Ireland should not become one of the richest lands within the Empire, and with the accession of wealth will come great building development.

Dublin is not only the capital but is one of the most interesting and picturesque of cities. The Liffey, running through it in an almost straight line, gives it a singularly Continental character. We regret that such a fine natural waterway should not be lined by finer buildings, though Gandon's Custom House and the great mass of the Four Courts, with its dominating dome, are buildings of which any city in the world would have reason to feel proud.

We get interesting vistas of the City Hall, Sackville Street, with its three monuments—the Nelson Column, flanked by the statue of the great liberator, O'Connell, and that of Charles Stewart Parnell, symbols, it might be added, of the growth of national sentiment since the eighteenth century. It seems fitting that Parnell, the leader of a movement largely financed from the funds of the Irish in America, should have been immortalised by an Irish-American sculptor. The destruction caused in the recent rebellion is evidence that the Irish problem has not yet been solved, and should also afford the Corporation of Dublin an opportunity to show that it is no less proud of the city than the eighteenth century builders who have given it its great monuments. The Bank of Ireland, facing the world-famous Trinity College with its stately library, are great proofs of the foresight and capabilities which were shown by the architects of the eighteenth century.

The two cathedrals, though interesting from their associations, do not bear comparison with any of the best of our great churches; they look neglected and gloomy, and have suffered at the hands of restorers.

It is to be hoped that means will be found to carry out by degrees a great development plan, such as is suggested by the schemes we illustrate in this issue, for Dublin has initial advantages which only require developments to make it one of the finest cities in the Empire. In Phœnix Park it possesses what is probably the stateliest and most magnificent outlet belonging to any city in Europe, while Howth and other surrounding districts have both charm and character.

The publications issued by the Georgian Society show what the domestic architecture of the city owes to the builders of the past, and also its differences from similar contemporary works in this country. It may be said to show traces of some of the characteristics of old Colonial work in America, and the full robustness of English Georgian work is absent.

Among good work of more recent date may be mentioned the National Museum and Library, which form a dignified group by Sir Thomas Deane, the New University College now being erected from designs by Mr. R. M. Butler, and the new Government buildings designed by the late Sir Thomas Deane and Sir Thomas Manly Deane, in conjunction with Sir Aston Webb, part of a large number of projected new buildings for the administrative departments.

An interesting illustration of the contrasts and changes which make up the history of Ireland is afforded by Maynooth, where the well-known College in which most of the Catholic priesthood of Ireland are educated, is situated. The village consists of a wide, straight street, lined with shops, over which are inscriptions in Irish and English and sometimes in Irish only. At one end of it is the entrance to Carton, the estate of the Dukes of Leinster, at the other that of Maynooth College, flanked on one side by the ruined castle of the Fitzgeralds, the

Sackville-street, Dublin, showing the Post Office and Nelson Column.

Anglo-Norman family, who, through the alchemy of time, became Irish rebels, and on the other by a fine old church belonging to the now disestablished and disendowed Protestant Episcopal Church. Maynooth College was founded in 1795, in consequence of an Act passed by the Irish Parliament to provide for the education of the priesthood, cut off from the Continent by our foreign wars. The centre is formed by an old Georgian house, to each side of which are long wings with return blocks forming three sides of a great quadrangle, at once simple and very effective in their quiet dignity. On the fourth and farther side of the quadrangle is the great church and other buildings, which were designed by Pugin in 1846 and completed subsequently in the style of the 13th Century Gothic revival, and behind these again are other buildings forming part of a further quadrangle.

Our standard changes with time, for many will derive more pleasure from the quiet ranges of the earlier buildings than the more ambitious buildings which owe their origin to Pugin's conception.

The railway leaving Dublin to the North runs through Drogheda across the broad estuary of the Boyne, through Dundalk, and into Ulster at Newry, between which town and Belfast the scenery is marked by altered characteristics, the evidences of manufacturing activities and the more rigorous climate which mark the "Black North" as distinct from the rich agricultural lands of Central Ireland.

It may be said that while the typical Irishman is proud of his country, despite its misfortunes, the Ulsterman of the four counties is too proud to admit that misfortunes can exist which are beyond the remedy of human endeavour, an attitude which perhaps renders him somewhat assertive and unsympathetic, but which has made Ulster one of the most prosperous districts under the English flag. A strong and active minority is in the nature of things intolerant, and the attitude of Unionist Ulster is expressed in the words, "*j'y suis, j'y reste.*" Loyalty to the common flag is combined with a little contempt of those who express their loyalty less openly, and the four counties which contribute the strength of Protestant Ulster are tinged with the intolerance of the old Puritan element from which they are derived. The rest of Ireland may look backwards, but Belfast points to the present, and anticipates the future with confidence. The story of the "red hand" the central feature of the Arms of Ulster, is oddly typical of the North. We are told that an early freebooter promised the first of his followers who should place his hand on the shore possession of the land, and one of his men seeing another boat ahead, feared he would be outdone, so he called for an axe, with which he cut off his right hand and threw it on shore in order to secure possession. Tradition says his successors became kings of Ulster and it would seem that the same virile element exists to-day, though it may not find expression in such dramatic incident!

The population of Belfast has grown from 70,400 in 1841, to 208,122 in 1881, and 385,492 in 1911, while its rateable value has increased from £185,000 in 1841 to £1,527,932 in 1911. Two of the great shipbuilding firms, Messrs. Harland and Wolff and Messrs. Workman Clarke and Co., employ 20,000 hands between

The Bishop's Gateway, Londonderry.

A View of Enniskillen.

them, and the linen industry, of which Belfast is the centre, is of large dimensions. Cotton, paper, ropemaking, whiskey, tobacco, and roofing-felt are among other large industries carried on in the city. Though the history of the commercial metropolis of Ireland goes back some hundreds of years, and James I. granted it a charter in 1613, Belfast has scarcely any reminders left of the past. The great City Hall, completed in 1906 from the designs of Sir Brumwell Thomas, stands four square in the centre of Donegall Square, a fitting symbol of municipal pride and aspiration. The old Linen Hall, which formerly faced the square, belonged to the historic past; the new municipal buildings and other monuments are typical of the present and the future.

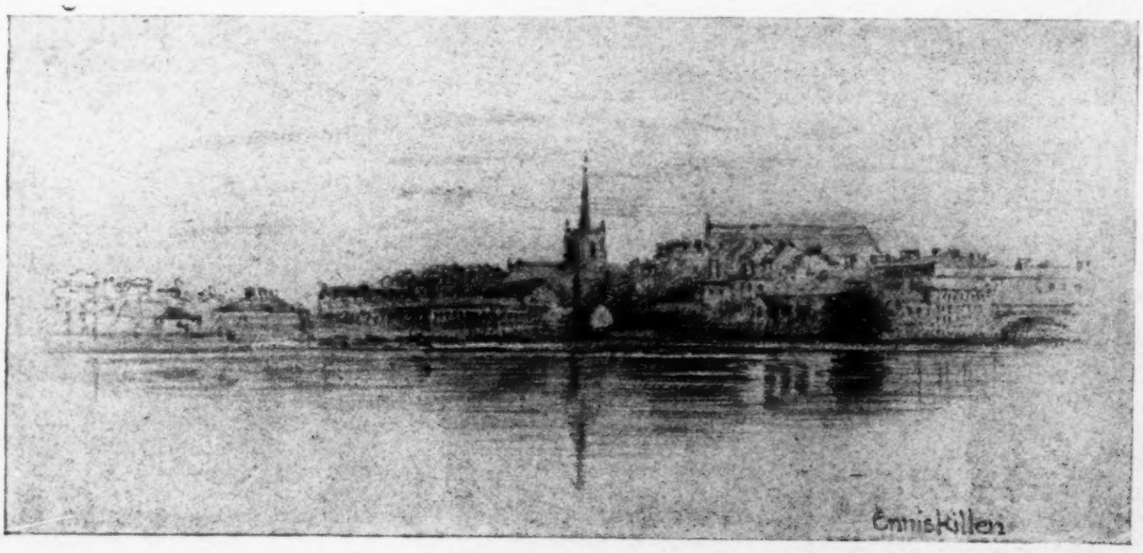
The best buildings in Belfast are probably those designed by the late W. H. Lynn, R.H.A., who has earned a great and well-deserved reputation. Among them may be mentioned the Free Library, Harbour Offices, and the Sinclair Seamen's Church, an able essay in Italian Gothic. The Campbell College, just outside Belfast, is another pleasing specimen of Lynn's work. The late Sir Charles Lanyon has left a number of important buildings of somewhat unequal merit, among them the Northern Bank, a dignified and quiet classic design, the Presbyterian College, which has merit, and Queen's College, a large building of a collegiate type of character, recently much enlarged. The new Protestant Cathedral, the work of the late Sir Thomas Drew, P.R.H.A., is a building of character and merit, conceived on broad and simple lines. Among later work may be mentioned Mr. S. Stevenson's Technical Institute, which cost upwards of £100,000, Messrs. Young & Mackenzie's Presbyterian Assembly Hall Offices, a dignified Gothic block containing a cleverly treated hall, having exceptionally successful acoustic properties, the same firm's Y.M.C.A. premises, and two blocks of insurance offices facing Donegall Square. The city surveyor is responsible for a very well planned abattoir, which is already regarded as a model. Among other municipal works now being carried out is a new sewage outfall by which the drainage of the city is carried out 1¼ miles into the Lough. Messrs. Tulloch & Fitzsimons are among the architects who have carried out extensive works in Belfast. Messrs. Henman's Royal Victoria Hospital is among the monuments of Belfast, and is an excellent instance of the application of a Plenum system of ventilation. At no time since its completion has any hitch occurred in the ventilating arrangements and the temperature has remained constant to within a range of 5° to 7°. It is somewhat surprising that a precedent which has given such good results at Birmingham and Belfast has not been more widely followed elsewhere.

Taken as a whole, Belfast suffers by its absolute newness; neither brickwork, which is unfortunate in its texture throughout Ireland, nor stonework appears to weather pleasingly; and though many of its buildings are excellent, they are, for the most part, too obviously built to meet utilitarian requirements and conform to economic limitations to have architectural character of a high degree, but with the abounding vitality and increasing wealth of the city, a time must come when æsthetic considerations will be more paramount.

But if there is little but what is new in Belfast, it is surrounded by towns of great historic associations, chief among which are Carrickfergus, with its fine Norman Castle and old gateways, Antrim, near which is Shanes Castle, and Armagh, the seat of the Primate of the Irish Church, and of a Catholic archbishopric. It is one of the places which are most closely associated with the early history of Ireland.

The interest of Belfast is mostly human in character, but it is situated in exceptionally fine natural surroundings of mountain and sea, which are to be seen at the finest in so many parts of the indented Irish coast.

The railway from Belfast to Londonderry, after passing inland through Antrim to Coleraine, reaches the sea, along the borders of which it runs through some of the most beautiful scenery in the world, between the shores of Lough Foyle and ranges of rounded hills to the south. Little can be imagined finer than the broad waters of the river Foyle before Londonderry is reached; the great feature of Ireland is that, short or long, its rivers attain a considerable width, owing to their lake-fed affluents and the abundant rainfall which gives the Foyle the characteristics of a great river almost from



Another View of Enniskillen.

Strabane to its mouth. Londonderry, though the county town, is geographically within County Donegal. Though historically the stronghold of the Protestant minority, it is now half Catholic, the Nationalists having secured the Parliamentary representation, while the Unionists are in a majority in the city council.

Few cities have the advantage of so perfect a situation as Londonderry, rising in stages from the banks of the swift-flowing Foyle, and in few have modern "improvements" done less to spoil the work of past ages. The two main streets cross at right angles, their intersection being enlarged into a square, making a pleasing feature, the effect of which is damaged by the erection of a huge block of commercial premises out of scale and style with its neighbours. The city walls and gates, and the Walker Memorial Column, are reminiscent of the famous siege in the reign of James II. Both the old Cathedral and the new Catholic one are well situated, and imposing in size; and the old town within the walls is full of quaint and picturesque corners, as well as good work of the Georgian era. The new Town Hall, though somewhat over ornate, groups picturesquely with the older buildings behind it, and its coloured glass windows, presented by the various city companies, are reminders of the Plantation Scheme initiated by James I. The companies also presented Londonderry with cannon in the seventeenth century, which are ranged in a row in the rear of the Town Hall. Londonderry is a city with many historical associations, and, it is pleasant to write, is also a thriving and developing centre.

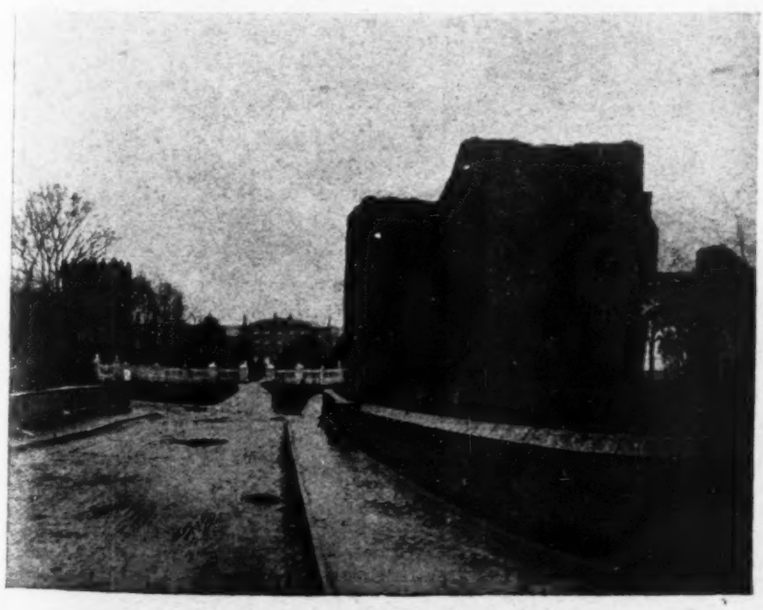
In Londonderry one feels near the limits of civilization, bounded as it is on the west by the wild hills and wastes of Donegal, which, with Connemara and Kerry, contains the finest scenery to be found in Ireland.

Southward the railway runs along the waters of the Foyle and through a land of streams and succession of lakes till Enniskillen, said to be the wettest district in all Ireland, is reached. Enniskillen, the chief town in County Fermanagh, is partly built on an island between the Upper and Lower Lough Erne and partly on the mainland, with which it is connected by two bridges. It is a town which groups picturesquely from many points, but contains no buildings of importance or great interest, but the district is an exceptionally beautiful one. Devenish island, two and a half miles from Enniskillen, contains the most perfect round tower in Ireland, as well as an Abbey and Cross. South and west of Enniskillen the country becomes flatter and barer, until the counties of Sligo, Mayo and Galway are reached, the railway running through a land of barren peat bogs, with occasional hovels and a succession of battered and ruined remains. West of the line and out of sight are the mountains and lakes of Connemara, but Galway on either side of the Great Southern and Western line is a bleak and forbidding country, and one which would seem to be a fitting stage for some of the highly-coloured stories of Irish peasant life. Tuam, the only town of any size between Sligo and Galway, is the see of a bishop of the Irish Church, the Cathedral, though much restored, being of considerable antiquity. It is also the seat of a Catholic archbishopric, the Cathedral having been built at a cost of £18,000, and near it is a training college for candidates for the priesthood. Southward of Tuam is Athenry, the junction for Galway and a place of historic interest.

Entrance to Maynooth College.

Athenry is very typical of the West of Ireland, a somewhat squalid village of considerable size, combined with the picturesque ruins of an abbey church of importance and interest, now used as a Catholic burying ground. The archway of a ruined castle of the De Burghs spans one of the narrow streets, the whole conveying an impression of its past importance.

Galway is the most interesting town in Western Ireland, and full of reminders of its greater past, when it was the third seaport in Ireland and the centre for trade with Spain. In the time of Elizabeth its inhabitants numbered 40,000, now it is nothing but a fishing port and holiday-makers' resort, the starting point for the highlands of Connemara. Many of the houses are in ruins, though in its streets still exist remains of houses inhabited by the wealthy of other days, some of which are arranged with arcaded courtyards, like those of Spain. Hibernian hopefulness has resulted in the building of an immense railway hotel, the fine and simple façade of which faces Eyre Square. It was built by Mulvanny for the Midland, Great Western Railway from the designs of John Skipton Mulvanny, in the days when it was believed that Galway would be made a great port for purposes of transatlantic traffic, a belief destined to disappointment. Galway is full of associations of the thirteen "tribes," Blakes, Lynches, Bodkins, Brownes, Skerrets, Kirwans, Morrises, Ffrenches, Martins, Joyces, and other old families descended from the early English settlers of the 13th and 14th centuries who built up a flourishing commercial community, and who are inseparably connected with the history of Galway. In the very fine Church of St. Nicholas, one of the most interesting of Irish mediæval buildings, are a series of fine tombs, the Joyce tomb, with its fine flamboyant tracery, being especially noteworthy. Lynch FitzStephen was mayor of Galway in 1493, and, tradition states, in one of his commercial expeditions to Spain brought back a young Spaniard as his guest. A quarrel occurred between Lynch's son and guest, in which the Irishman stabbed him, for which he was arraigned, tried, and condemned, but as no one could be found to carry out the sentence, Lynch hanged his son with his own hand. The town is full of remains of past grandeur and importance, and armorial bearings are to be seen everywhere. Lynch's "castle," battered and altered in successive centuries, still remains and shows traces of delicate ornament and architectural features. Near the quays are tall warehouses, built during the early eighteenth century, when the export trade was a great one, and now merely reminders of past importance and glory. On the other side of the tumultuous river which runs into the sea at Galway is the collection of hovels known as the "Cladagh," inhabited by fishermen said to be descended from old Spanish settlers, and in the streets of Galway are to be seen peasants in the old native



View looking towards Maynooth College.

costume, on high days and holidays. There are several Catholic churches of the late Renaissance epoch, a new Dominican church at the Cladagh, and preparations are being made for building a Catholic cathedral in Galway itself.

Few places could prove more interesting to the architect who has a taste for archæology and history than Galway, and it is to be hoped that someone having the requisite knowledge may be found to illustrate and describe its records.

South of Athenry, the railway runs through a region of old remains, among which may be mentioned the great Cistercian abbey of Quin and Clare Castle, to Limerick, which has the appearance of a prosperous and thriving town, as well as one replete with reminders of a great past.

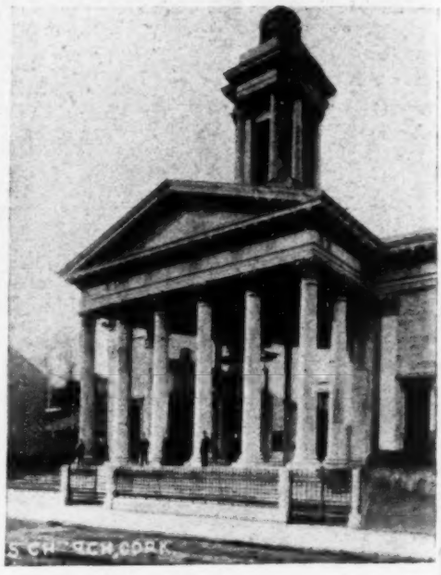
The oldest part of Limerick is the "English town," built on an island in the Shannon, and containing King John's castle, with its big round towers and an interesting but somewhat dismal church. The Treaty Stone, which recorded the honourable terms wrested by Sarsfield from the besiegers of Limerick is a poor memorial of a great event. The bulk of Limerick is a fine well-laid-out town of Georgian type, with spacious streets and dignified buildings, and on a fine elevated site is placed a large Catholic cathedral, built from the designs of Hardwick.

From Limerick to Cork is a long run by slow trains through country which is a little uninteresting since the most beautiful natural scenery lies well to the west in Kerry and Western Cork.

Cork is one of the pleasantest cities of Ireland, laid out broadly and generously, and dignified by the fine river Lee, by which it is cut into two portions. While it has few buildings of the first importance, it has many which reach a good standard of architectural interest, including several good Renaissance churches, a fine Court House, and there is everywhere evidence of prosperity and well-being. Burgess' Cathedral of St. Fin Barr must come as a surprise even to those who have seen his work elsewhere, for though almost incredibly coarse in many of its architectural features, the sculpture and accessories show a mastery of the architectural value of sculpture and a power of assimilating the spirit of mediæval art, which are absolutely marvellous. If every record of the Middle Ages were destroyed, this one building would give us more knowledge of the spirit of mediæval work than anything left to us could do. Cork also contains one of the finest of modern Irish buildings in the Munster and Leinster Bank, recently completed from the designs of Messrs. Arthur Hill and Henry H. Hill, much of whose dignified and well-thought-out work is to be met with in their native city. Cork University is a building of comparatively small architectural merit, but is pleasant from its surroundings, and it may be said that Cork is exceptionally fortunate in this respect.

From Cork to Queenstown is a pleasant half hour's run along the side of the wooded banks of the Lee, and the naval station and port of Queenstown are dominated by a huge new cathedral, one of the astonishing reminders of the energy and vitality of the Catholic Church, and the tireless work it is carrying out throughout the length and breadth of Ireland.

Between Cork and Dublin it is possible, by foregoing the advantages of the few fast trains in Ireland, to visit Cashel, that wonderful collection of ancient buildings erected on a mound in Central Tipperary. Few groups of buildings ever erected are so picturesque in their mass and interesting in their associations as Cashel, and to Englishmen the most interesting part of the whole will be Cormac's Chapel, which reminds us of our own Norman work, with subtle and marked differences showing the influence of the earlier Celtic art of Ireland. The view from the Mount of Cashel over the surrounding plain on a fine day, with the Galtee Mountains showing blue in the distance is a sight never to be forgotten.



St. Patrick's Church, Cork.

The College Chapel, Maynooth.

These notes, written after a brief visit during last autumn, in which many hundred miles were covered, are only sufficient to convince the average Englishman that much study and research would be necessary before anything like an idea could be formed of the artistic features of Ireland. More archæological and historical knowledge would be necessary than for such a comparative study here. Battered and altered in the course of time though our buildings have been, they are well preserved and easy to read compared with those of the sister island. The great poverty of well-defined examples of the middle and later Gothic period, the almost entire absence of work of the Transition period or the earlier Renaissance, results from the troubled history of the land, a cause which will, we hope, be happily ended in the near future when it may be possible for the development of art to attain to a new and nobler future.

Ireland has suffered from the oppression of minorities in the past, but the very fact that minorities were then given rights and privileges renders it necessary for those in authority to protect them from the possible oppression of majorities in the present.

The maintenance of equal rights and equal privileges for men of all faiths, creeds, and colour of opinion was never more necessary anywhere than it is in the Ireland of to-day, and if the task of statesmen has been made more difficult by the misdeeds of the past, more patience and consideration are involved.

It must be hoped that, in the future, the Irish will form one of the most prosperous and happy peoples in the coming federation of Greater Britain, each section having the fullest local autonomy, while all will be united for the furtherance of a common national destiny.

Book Received.

SOME MODERN METHODS OF VENTILATION. By R. Grierson, A.M.I.M.E., A.M.I.E.E., &c. (London: Constable & Co., Ltd. 8s. 6d. net.)

St. Anne's Cathedral, Belfast.

CHURCH BUILDING IN IRELAND.

Of the total population of Ireland, 74 per cent. are Catholics, 13 per cent. members of the Irish Episcopal Church, and 10 per cent. belong to the Presbyterian Church of Ireland. The Protestant Episcopal Church, until 1871 the Established Church of Ireland, have needed comparatively few new buildings since the old churches built in mediæval centuries passed into their possession at the time of the Reformation. Burges' great work, the new Cathedral of St. Finn Bar, at Cork, is the greatest new building erected by their community; and in many respects the most remarkable building not only of the Gothic Revival but of modern times. Burges was not so much an architect of the Revival as a re-incarnation of the thirteenth century, and his work shows a knowledge and feeling of the architectonic value of sculpture such as no one else has possessed for centuries. His work, whether at Cork or Cardiff, despite its faults of detail, lives and breathes the old Gothic spirit. Besides Burges, the Episcopal Church employed Wyatt, Papworth, Fuller, Butterfield, Lynn, Sir Thomas Drew and Sir Thomas Deane as architects for various churches in Ireland, and the modern work which has been carried out for it frequently reaches a high level of excellence.

The Presbyterian Church have carried out much church building in the large towns of Ulster, while Magee College at Londonderry is one of the greatest theological training colleges in the world.

Between the period of the Reformation and the passing of the Catholic Emancipation Act in 1829, with the exception of a brief interlude during the reign of James II, the Catholics of Ireland were placed under enormous disabilities and disadvantages. It is greatly to the credit of the governing minority that the Penal Laws were systematically evaded, since it was only owing to the concurrence of those for whose benefit they were passed that they could have been so evaded. Still they will always be regarded as one of the incomprehensible monuments of injustice which the stupidity of past governments made possible. The greatest proof of the attachment of the great mass of the population to their ancient faith is afforded in the fact that the Penal Laws not only failed to eliminate Catholicism, but did not even impair its strength.

The repeal of the laws was followed by an era of church building which, taking into consideration the disparity of wealth and population of Great Britain and Ireland, has no parallel in modern history.

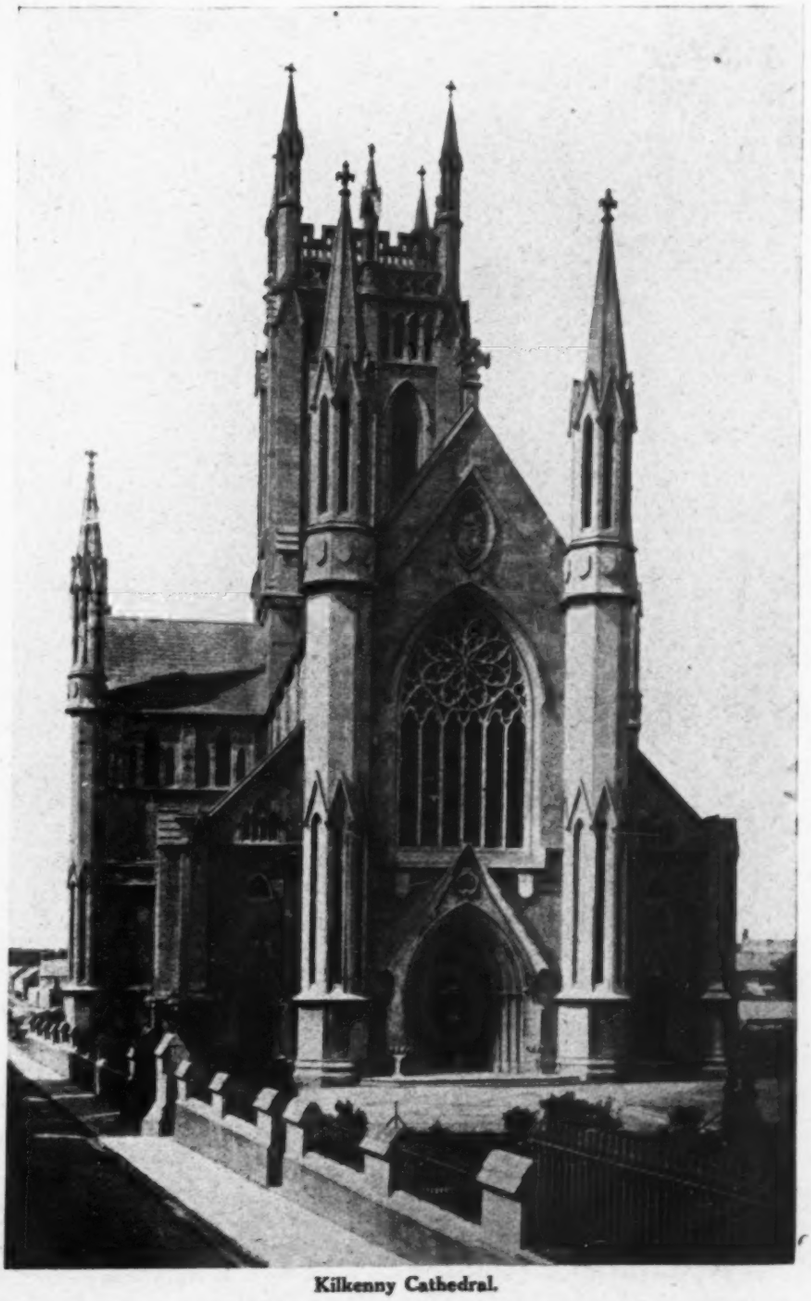
The ancient mediæval history of Ireland is expressed in a series of buildings stretching backward century by century to the time of St. Patrick, and as these buildings had passed into the possession of another religious community, the oldest Catholic churches are those which belong to the era of the Renaissance, which is well represented in Dublin, Cork and other cities by a series of buildings of architectural merit and interest. But as the middle period of last century was a time when the ideals of the Gothic Revival held sway among architects, most of the modern churches in Ireland are conceived in a Gothic manner, the "rigidity" of the Revival lasting longer in Ireland than in England.

There are three views which may be advanced as to the most suitable type to select for modern church building in Ireland, and for each of them much may be said. The early architecture of Ireland has distinctive features making it more truly "Irish" than anything else can be, while it is also connected with the earlier traditions of the Church. The interesting work now being carried out by Mr. R. M. Butler and others in different parts of the country indicates what is possible when working on these lines.

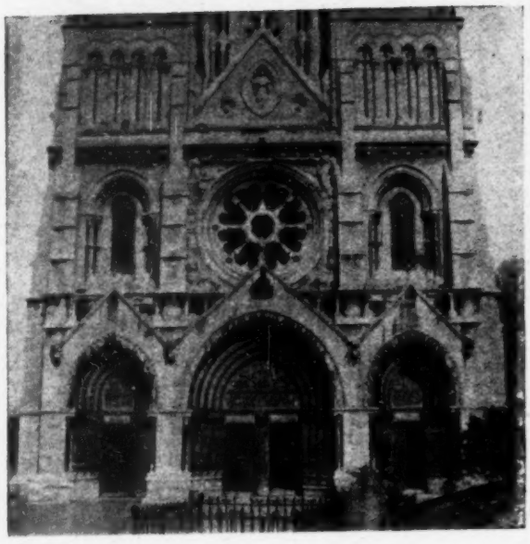
The architecture of the Revival and the later developments from it would draw on the whole wealth of past Gothic ages broadened and modified to suit new conditions. It has little which is distinctively Irish about it, neither has it a close and intimate connection with the history of the Irish Church, but so far it is the type which has been most generally followed during the past century.

The third type is the architecture of the Renaissance, which is connected with the history of the Church during the troubled times when it maintained its vitality despite trial and difficulties; but apparently the choice of the Irish would lie between the first two types mentioned rather than the third, which has some obvious recommendations. The College of St. Patrick, at Maynooth, illustrates the changing ideals of a century. Founded in 1795, in consequence of an Irish Act of Parliament, to provide a place of education for the priesthood of Ireland cut off from foreign colleges by war, it has become a great educational centre in which the larger part of the priesthood of Ireland receive their training, and more than £75,000 has been expended upon its buildings.

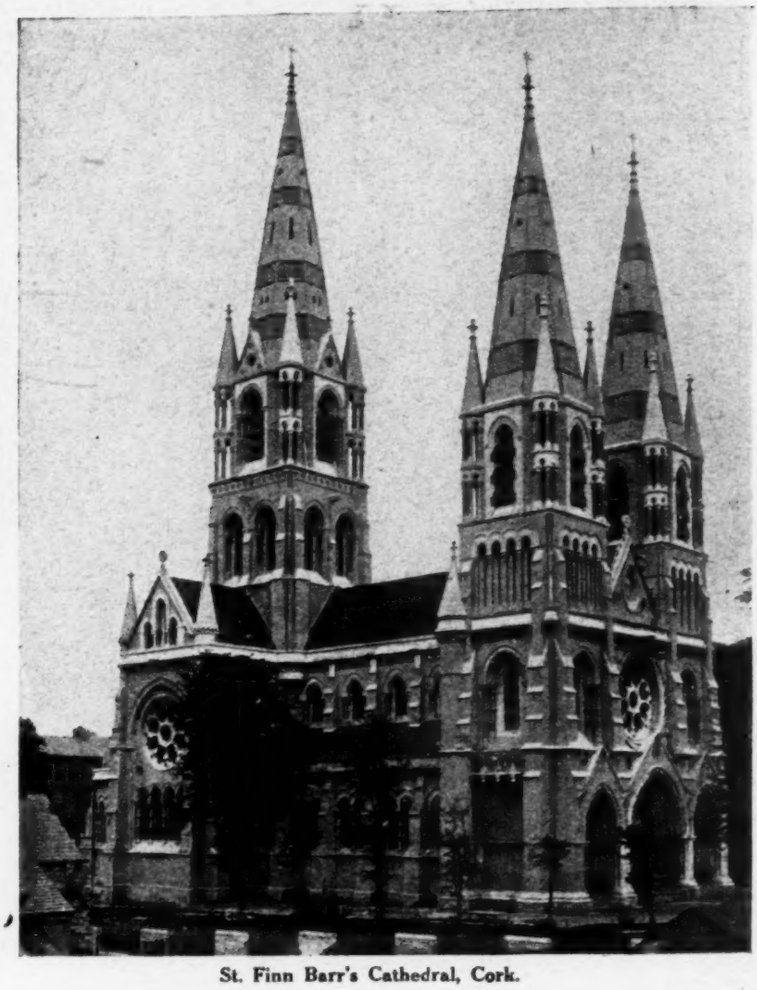
The long-continued effort which resulted in the completion of a Catholic cathedral at



Kilkenny Cathedral.



St. Finn Barr's Cathedral, Cork.



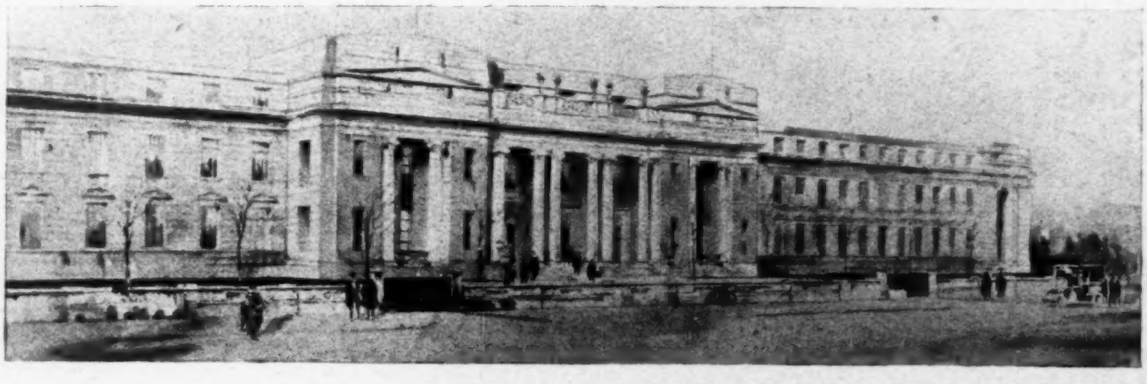
St. Finn Barr's Cathedral, Cork.

Armagh is typical of the efforts to which Ireland owes many of its new churches. The foundation stone was laid in 1840, designs having been prepared by Mr. Duff, of Newry; the foundations were immensely costly, having, in consequence of the nature of the soil, to be carried down in some cases as much as 60 ft. Parish contributions were organised from Derry to the Boyne, and weekly collections made in Armagh to provide funds for the work, Bishop Crolly being untiring in his labours to help the work. The years of famine and cholera followed, and funds were diverted to succouring its victims, Dr. Crolly himself dying of cholera while on a pastoral visit to Drogheda. His two successors carried on the work organizing collections both in Ireland and America. The death of the original designer occurred; and the new architect, Mr. McCarthy, of Dublin, introduced many changes into the design, abandoning the original Perpendicular design with three towers for one of a fourteenth-century type with two western spires. A third primate, Dr. M'Gettigan, lived to see the completion of the new cathedral, which was finally dedicated on August 24, 1873. Since that time, under the administration of the present Primate, Cardinal Logue, very large sums have been spent in decoration and other work and in paying off debt, no less than £30,000 being raised at the National Cathedral bazaar of 1900. The actual building has taken thirty-three years to erect, or two years less than St. Paul's, and similar efforts have been required to carry to completion other great churches carried out in the last century in Ireland. *Cæteris paribus* the building of Armagh, Queenstown, and other of the great churches of Ireland is as remarkable as the completion of St. Peter's at Rome or St. Paul's in London, as the one was made possible by the offerings of half of Christendom and the wealth of mediæval Rome, and the other was assisted by the imposition of many dues by the City of London and the funds of the Established Church, while the cathedrals of Ireland have been chiefly built out of the offerings of the peasantry of Ireland. Armagh Cathedral has cost £250,000 in all up to the present time.

Among other cathedrals which have been built in Ireland are those of Queenstown, which stands like a sentinel on the fairway of the great Atlantic liners, and on which £250,000 has been expended; Killarney, a fine example of Pugin's skill, costing £180,000; and Monaghan, built at a cost of £150,000. Kilkenny, a simple and pleasing cathedral, cost £60,000, and about the same amount has been expended on the cathedral at Limerick. Other cathderals have been erected in Londonderry, Thurles, Letterkenny, Sligo, Loughrea, and Longford, besides a long list of parochial churches in every district of Ireland, the erection of which has been made possible both by gifts of money and offerings in kind, taking the shape of material, cartage, etc

The data which follow have been kindly given by the authorities of various dioceses in Ireland, and will show more forcibly than any words the amount of work which has been carried out by the Catholic Church within recent years.

It is easy to be critical and to point out defects in much of the work which has been executed and which does not attain to a high aesthetic standard, but the first necessity in great building eras is that there should be a cause which excites enthusiasm and determined effort, and we have shown that this essential exists. Whether the great movement which has far from spent itself, and which may even be accelerated by conditions of prosperity, is directed into the most worthy channels will depend on the heads of the Church and the co-operation of all those to whom the art of a people is a thing of importance. Imposing municipal architecture necessitates wealthy urban communities, while Ireland is predominantly agricultural.



University College, Dublin. MR. R. M. BUTLER, F.R.I.B.A., ARCHITECT.

Leading Contents.

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ILLUSTRATIONS.

THE "BUILDER" CALENDAR.

WE give in this issue the *Builder* Calendar for 1917, showing a reproduction of the late H. W. Brewer's drawing of Cheapside in the time of Henry VIII.

Windmill, Bruges, and Old Wooden Houses, Ypres.

INCLUDED in our Illustrations will be found reproductions from two admirable etchings of Mr. Frank Brangwyn, A.R.A.

University College, Dublin.

THIS building, begun early in 1914, is still in course of construction, one wing being finished and in occupation, housing the Department of Experimental Science.

The new buildings are being built on the very circumscribed site of the old Royal University of Ireland, at Earlsfort-terrace, Dublin, originally built for the purpose of an International Exhibition in 1867, from the designs of the late Mr. Alfred Jones, of Dublin. The new University College was established a few years ago under the Irish Universities Act, as one of the three constituent Colleges of the new National University of Ireland, the other two being University College, Cork, and University College, Galway, and which respectively succeeded to the premises of the old Queen's Colleges in those cities. The Royal University, a non-teaching and purely examining body, was abolished.

The complete scheme for University College, Dublin, comprises a group of buildings planned on very simple and axial lines around two quadrangles. The scheme provided for the carrying out of the works in two sections. The first of these, comprising the completed Department of Science and the façade to Earlsfort-terrace, containing the administrative buildings of the Department of Arts, constitutes the present contract. It is hoped, in the near future, to undertake the building of the School of Anatomy and Physiology, and the Library. The great hall and the remainder of the scheme are postponed *sine die*.

The architectural treatment is frankly based upon the eighteenth and early nineteenth century Renaissance work of Dublin, the Græco-Roman phase influencing the detail. The main order is the Ionic of the Temple of Eleusis, adapted with little change. The exterior façades are carried out in a very fine white Irish lime-stone of great hardness and durability, from the quarries of Mr. James Kiernan, at Stradbally, Queen's County, who wrought all the stonework in extremely skilful and accurate fashion, the supply being well kept up through the course of building. The façades towards the quadrangles are of cement, sand finished, with dressings of granite from Osborne's Ballyknocken Quarries, County Wicklow, the funds available being much too limited to admit of cut stone throughout.

Internally, the buildings are all finished with the greatest simplicity, the strictest economy being of necessity practised. The only embellishments are the marble pavings in the principal halls and corridors, the mahogany doors, following the old Dublin custom, and some plaster decoration.

The general contractors were Messrs. G. & T. Crampton, of Dublin. R. M. BUTLER.

Kilcar Church, co. Donegal.

THIS church, completed a few years ago on a picturesque site, amidst the most beautiful sea and mountain scenery of Donegal, was built by Messrs. Campbell & Sons, building contractors, Ormeau-road, Belfast.

It is built of the local stone, in a simple form of design, based on the Hiberno-Romanesque. It comprises nave, aisles, chancel, two chapels, narthex, vestry, and western organ gallery.

The marble altars and marble chancel rails are by Messrs. Harrison & Son, Dublin.

R. M. BUTLER.

The Belfast Abattoir.

THE Belfast Abattoir is one of the most scientifically planned and arranged buildings of its type which have been erected. Its great features are the very economical manner in which it has been planned and the unusual skill with which the complicated apparatus and fittings have been worked out, the City Surveyor, Mr. H. W. Cutler, M.Inst.C.E., having designed most of the fittings, which are probably the best of their kind ever devised. The site in Stewart-street was selected because of its close proximity to the markets, cattle sale yards, and railway, the animals being delivered direct without crossing the city. Space for extension has been provided, the buildings and their passages covering three-and-a-quarter acres, and the abattoir has cost £52,000.

The dressing hall is equipped with sixty hoists, forty electrically driven and specially designed, and twenty hand-operated. The electric hoists are of the worm gear type built up in pairs, one for hauling out and one for dressing; they are driven by electric motors through line shafting in series of eight, and are so arranged that current will only be used when one (or more) hoist in each series is actually working. The electric control switches, which have been specially designed, are connected with the clutch fork levers of the hoists so that the starting of any hoist is performed by one operation. The clutch forks are held in position during the time the hoists are lifting and are pulled out by springs immediately the handles are released, so that no machinery will be in motion unless one (or more) clutch is being held in. Lowering is effected by releasing band brakes normally kept in position by springs, and the control levers must be held down during the whole time of lowering as the springs put the brakes on immediately the lowering handles are released. The cambrils are of the double-rope type so designed that when the carcases carried are split down the back the two sides automatically gravitate to a central position ready for transference to the runway. The runway is very substantially constructed and of the twin bar type which requires no moveable points, and there are, therefore, no moveable parts to get out of order. The runway trolleys are fitted with ball bearings and have double hooks which enable two sides of a beast to be transferred from hoist to trolley at one operation.

The whole of the drainage from the cattle dressing hall will pass through a specially designed fat screen which will automatically remove the particles of fat and deposit them in a receptacle provided for the purpose. The screen is of 1-16 in. mesh wire gauze in the form of an endless belt, placed at an angle of 30° to the horizontal. The screen is driven by a motor, and the particles of fat arrested and carried up on the screen will be automatically swept by a rotary brush into a portable receptacle. (See p. 23 for further views.)

City of Dublin New Town Plan.

We give illustrations of Messrs. Patrick Abercrombie and Messrs. Kelly's design, which is described in our article on page 14.

We also give illustrations of the competitive schemes submitted by Messrs. Bogle, Burroughs, Panton & Newbold, and Mr. Cushing Smith, which are referred to in our article on page 14.

Munster and Leinster Bank, Cork.

This fine bank, which has been carried out from designs of Messrs. Arthur and Henry Hill, of Cork, is among the finest modern buildings which have been erected in Ireland, and is, both in plan and elevation, scholarly and refined. (See p. 22 for view and plan.)

The General Presbyterian Assembly Hall, Belfast.

This fine block of buildings, the chief feature of which is the large Assembly Hall, has been carried out from the designs of Messrs. Young & Mackenzie, of Belfast, at a cost of about £100,000.

Interior View St. Colman's Cathedral, Queenstown.

WE give a view of the great cathedral at Queenstown which has been recently completed in accordance with designs by Messrs. Ashlin & Coleman.

Interior View St. Patrick's Cathedral, Armagh.

WE give an illustration of the altar of St. Patrick's Cathedral, Armagh, recently completed from designs by Messrs. Ashlin and Coleman.

St. Peter's Church, Phibsborough.

THE view shows a fine church erected from the designs of Mr. G. C. Ashlin, F.R.I.B.A.

St. Columba, Drumcondra, Dublin.

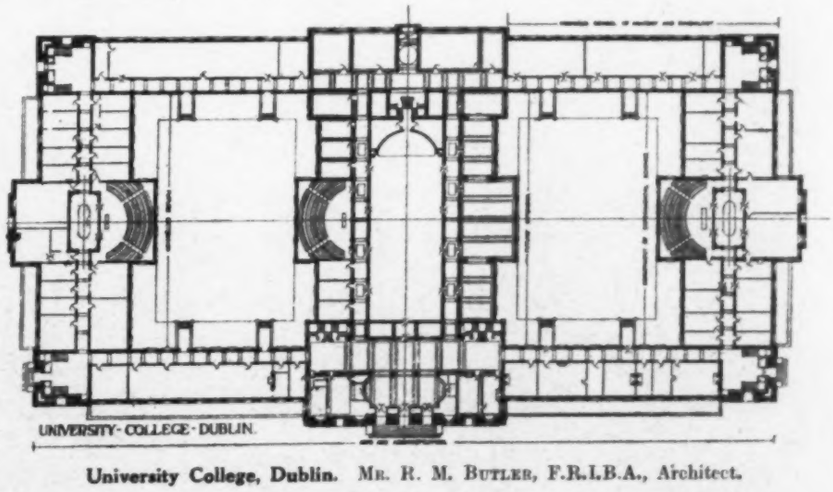
THIS church, carried out in a Romanesque manner, has been carried out from designs by Messrs. Ashlin & Coleman.

Irish International Exhibition, 1907, and the Royal Hospital for Incurables, Donnybrook.

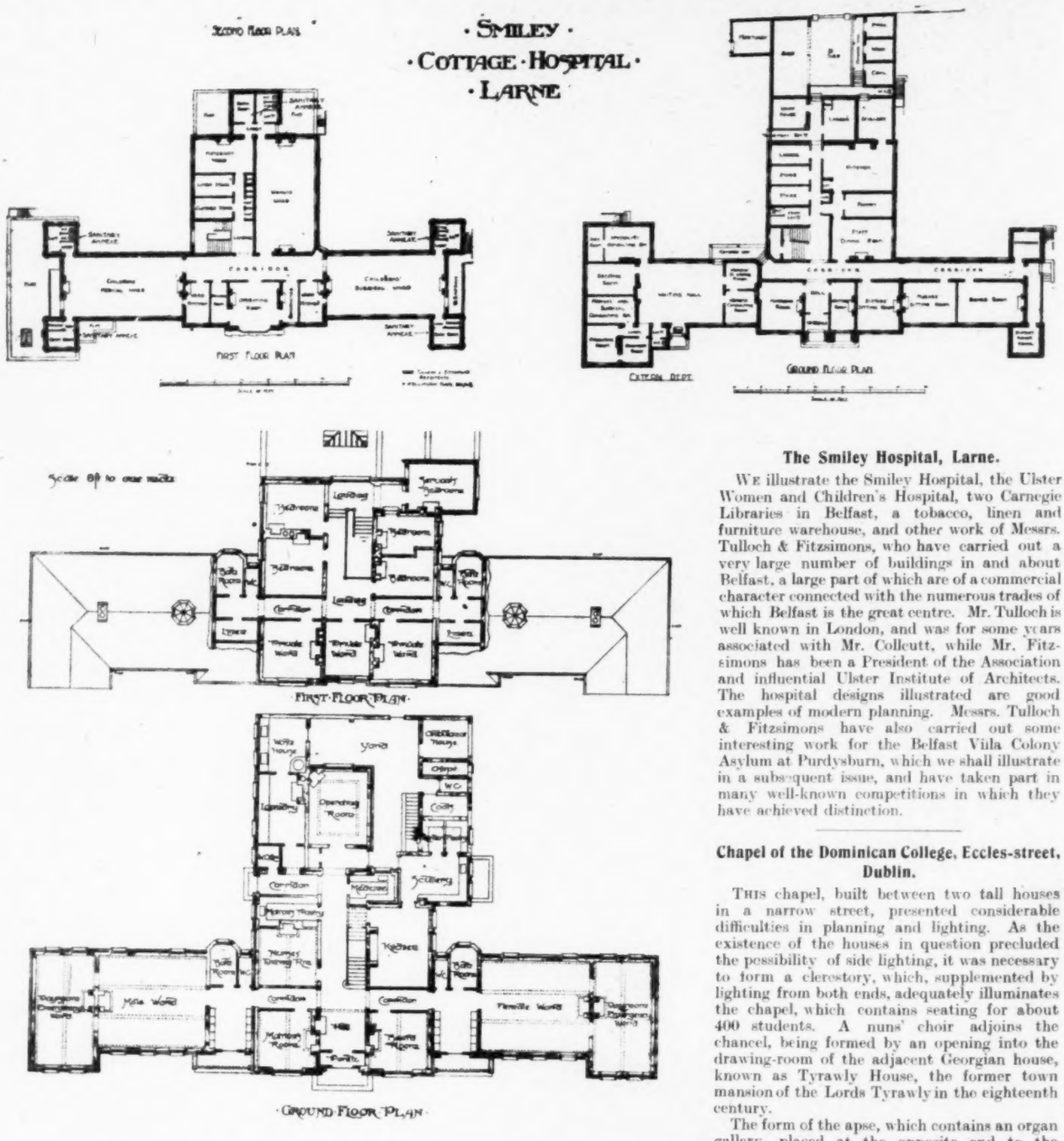
WE illustrate two important designs by Messrs. Kaye-Parry & Ross, the one for the central building for the Irish International Exhibition of 1907, and the other a large Sanitorium for Incurables at Donnybrook.

Killarney Cathedral.

THIS cathedral was designed by Pugin, recent additions being made from designs of Messrs. Ashlin & Coleman.



University College, Dublin. MR. R. M. BUTLER, F.R.I.B.A., Architect.


SECOND FLOOR PLAN
· SMILEY ·
· COTTAGE · HOSPITAL ·
· LARNE
FIRST FLOOR PLAN
GROUND FLOOR PLAN
Scale of 16 to one inch
FIRST · FLOOR · PLAN ·
GROUND · FLOOR · PLAN ·

Smiley Cottage Hospital, Larne.
MESSRS. TULLOCH AND FITZSIMONS, Architects.

The Smiley Hospital, Larne.

WE illustrate the Smiley Hospital, the Ulster Women and Children's Hospital, two Carnegie Libraries in Belfast, a tobacco, linen and furniture warehouse, and other work of Messrs. Tulloch & Fitzsimons, who have carried out a very large number of buildings in and about Belfast, a large part of which are of a commercial character connected with the numerous trades of which Belfast is the great centre. Mr. Tulloch is well known in London, and was for some years associated with Mr. Collcutt, while Mr. Fitzsimons has been a President of the Association and influential Ulster Institute of Architects. The hospital designs illustrated are good examples of modern planning. Messrs. Tulloch & Fitzsimons have also carried out some interesting work for the Belfast Viila Colony Asylum at Purdysburn, which we shall illustrate in a subsequent issue, and have taken part in many well-known competitions in which they have achieved distinction.

Chapel of the Dominican College, Eccles-street, Dublin.

THIS chapel, built between two tall houses in a narrow street, presented considerable difficulties in planning and lighting. As the existence of the houses in question precluded the possibility of side lighting, it was necessary to form a clerestory, which, supplemented by lighting from both ends, adequately illuminates the chapel, which contains seating for about 400 students. A nuns' choir adjoins the chancel, being formed by an opening into the drawing-room of the adjacent Georgian house, known as Tyrawly House, the former town mansion of the Lords Tyrawly in the eighteenth century.

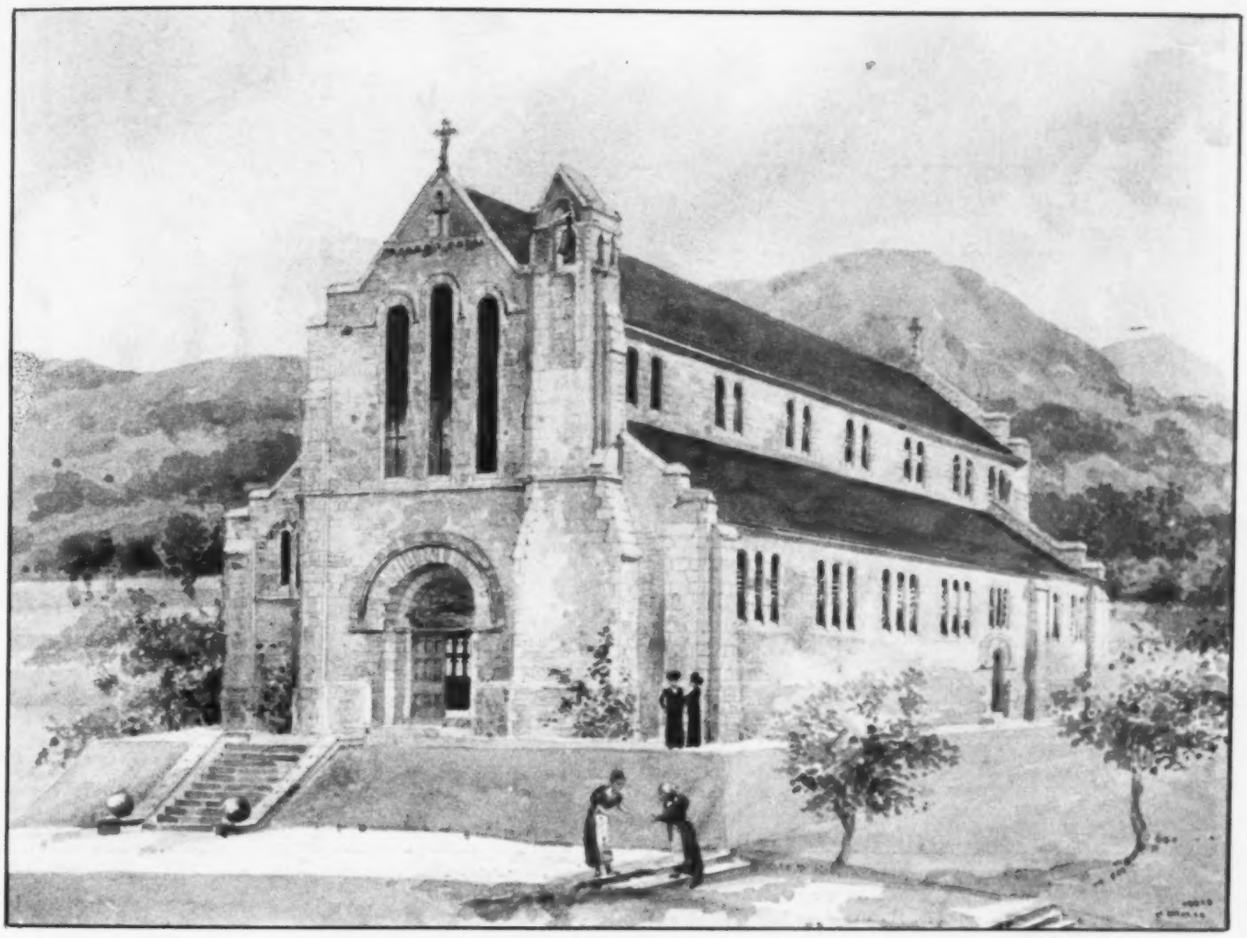
The form of the apse, which contains an organ gallery, placed at the opposite end to the chancel, was dictated by the same considerations, and to avoid obstruction of light to the adjacent buildings which are part of the College premises. The chapel is situate on an upper story over a basement occupied by extensive kitchens and refectory, capable of dining 250 persons.

The architectural treatment of the chapel was more or less suggested by the Georgian work of the College houses. The front towards Eccles-street is of cut-stone from Osborn's Granite Quarries, at Ballyknocken, and has a slightly projecting curved oriel window to the chancel.

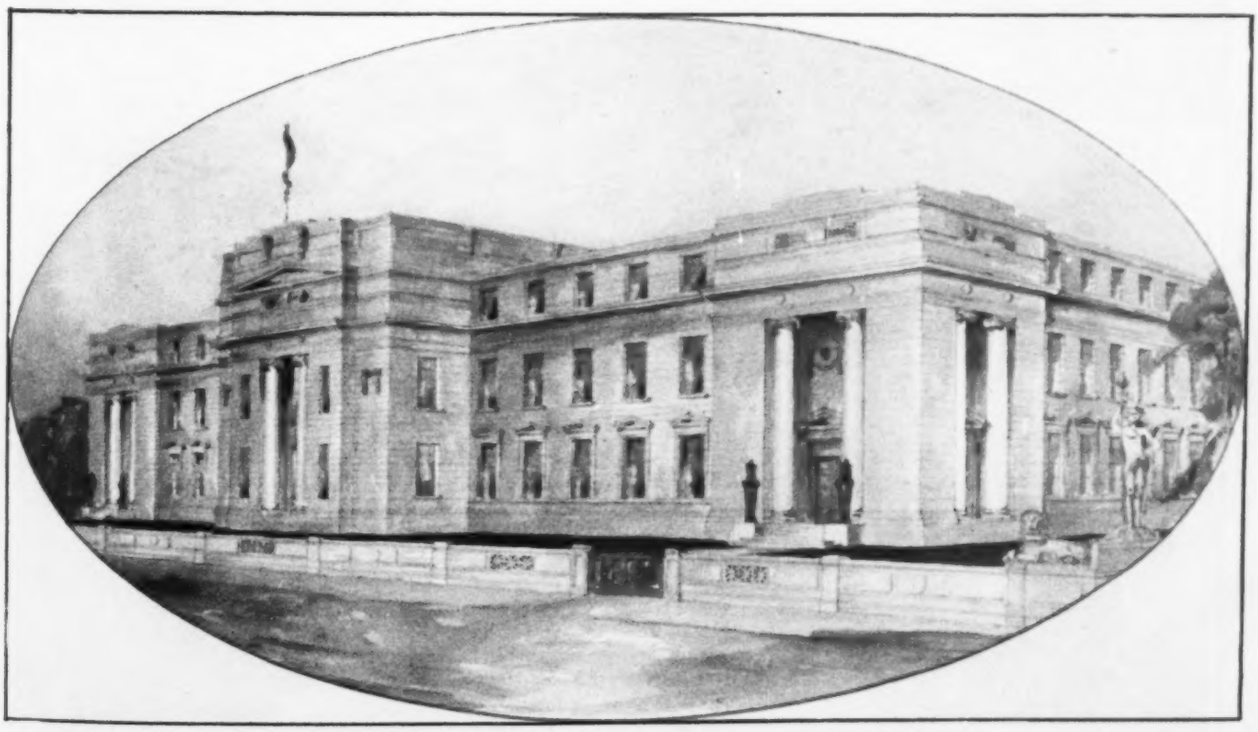
In one of the side chapels is a very beautiful stained glass window from the studio of Miss Sarah Purse, R.H.A. Other windows are by Messrs. Clarke, Dublin, and Early, Dublin.

The general contractor was Mr. K. Toole, Dublin; fibrous plaster, Mr. John Ryan, Dublin; electric lighting, Messrs. Cummins, Dublin. The seating is of oak inlaid with ebony. The altar and chancel rails are temporary.

R. M. BUTLER.



KILCAR CHURCH, CO. DONEGAL.—MR. R. M. BUTLER, F.R.I.B.A., ARCHITECT.



UNIVERSITY COLLEGE, DUBLIN.—MR. R. M. BUTLER, F.R.I.B.A., ARCHITECT.

ST. PETER'S CHURCH, PHIBSBOROUGH.—MR. G. C. ASHLIN, F.R.I.B.A., ARCHITECT.

ST. COLUMBA'S CHURCH, DRUMCONDRA, DUBLIN.—MESSRS. ASHLIN & COLEMAN, ARCHITECTS.

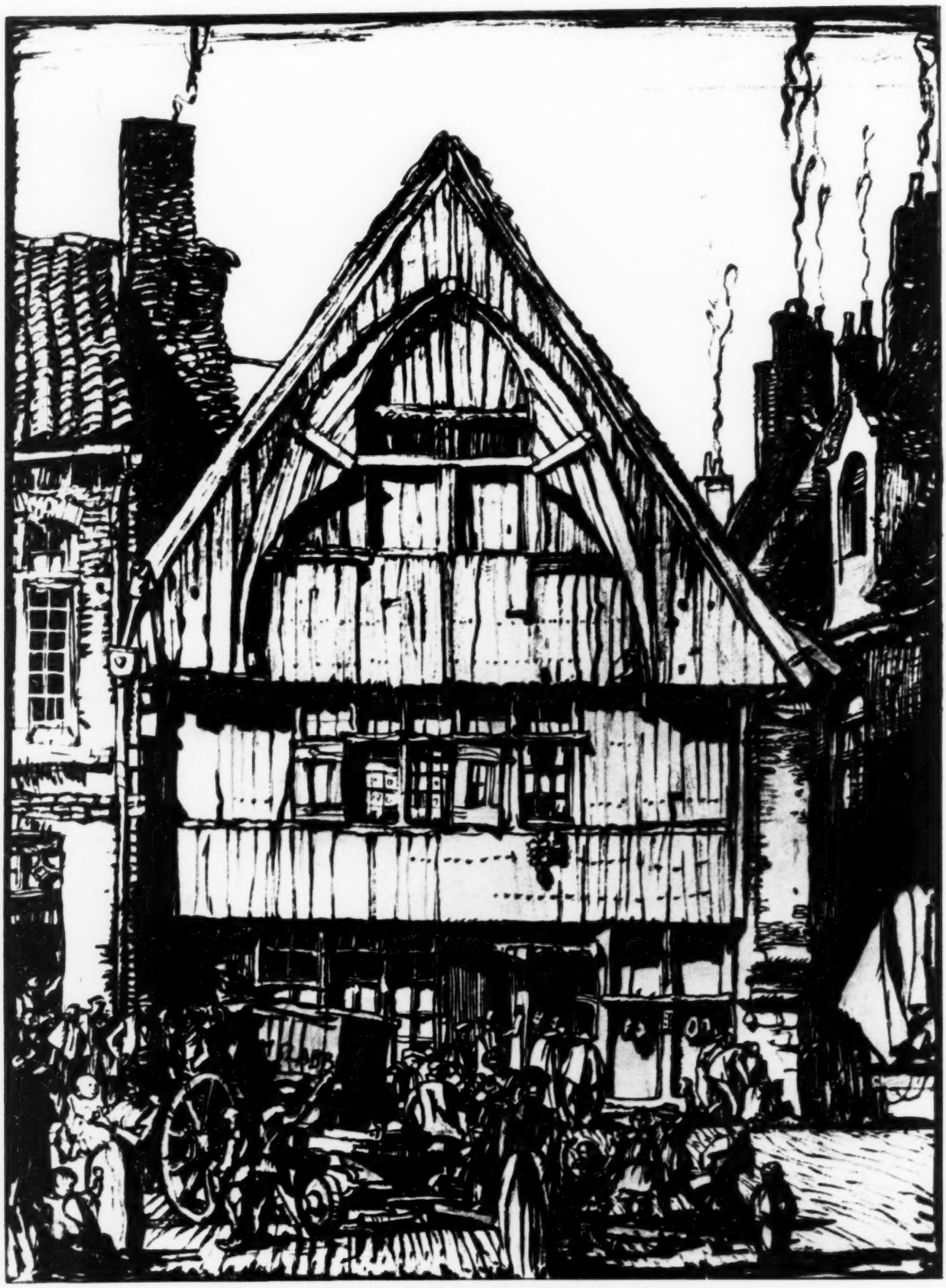
KILLARNEY CATHEDRAL.—Designed by Pugin.

Additions from Designs by Messrs. Ashlin & Coleman, Architects.

St. Colman's Cathedral, Queenstown.—Mr. G. C. Ashlin, F.R.I.B.A., Architect.

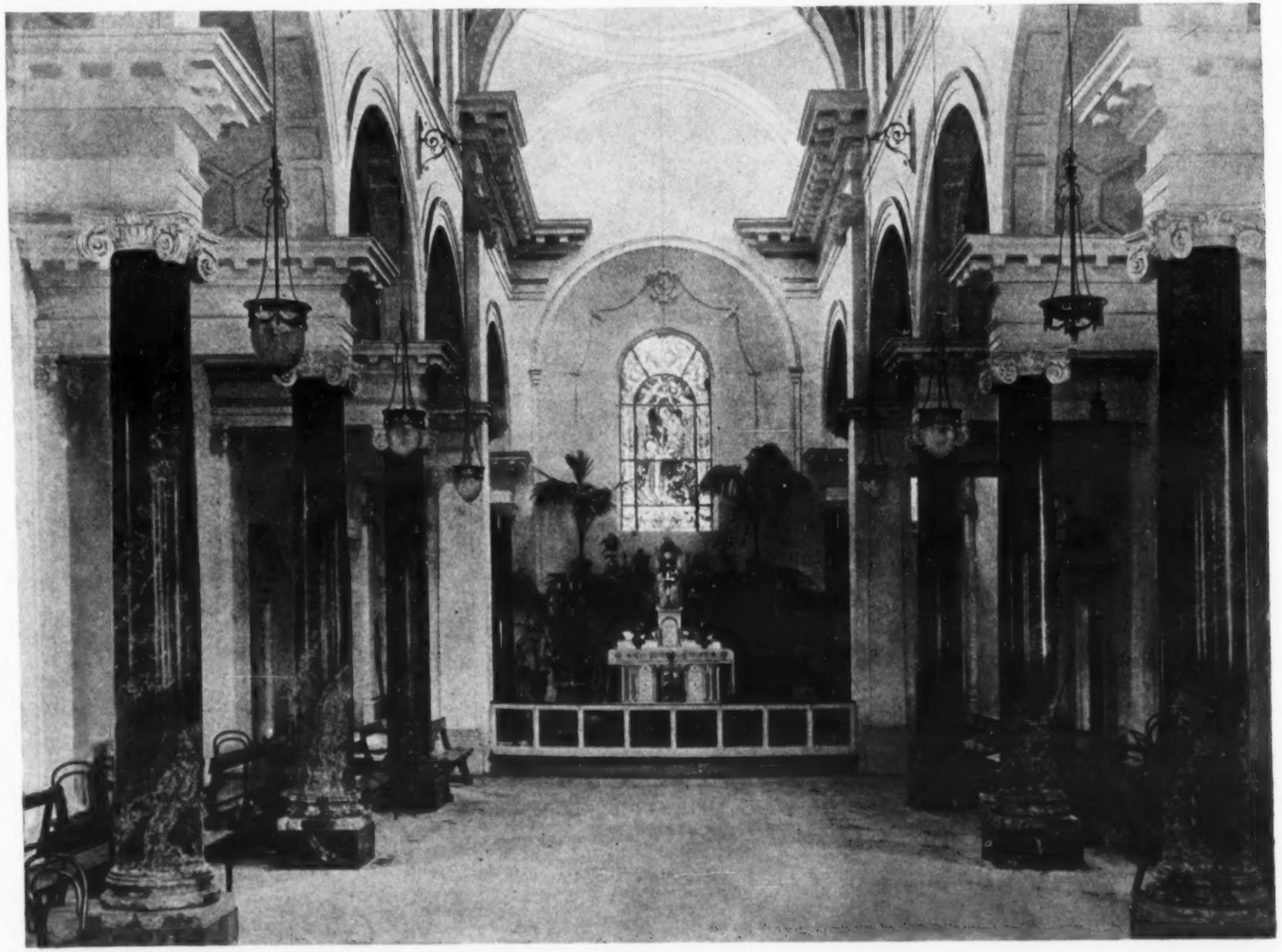
ST. PATRICK'S CATHEDRAL, ARMAGH.—INTERIOR, SHEWING MARBLE SCREENS AND MOSAIC.

COMPLETED UNDER MESSRS. ASHLIN & COLEMAN, ARCHITECTS.



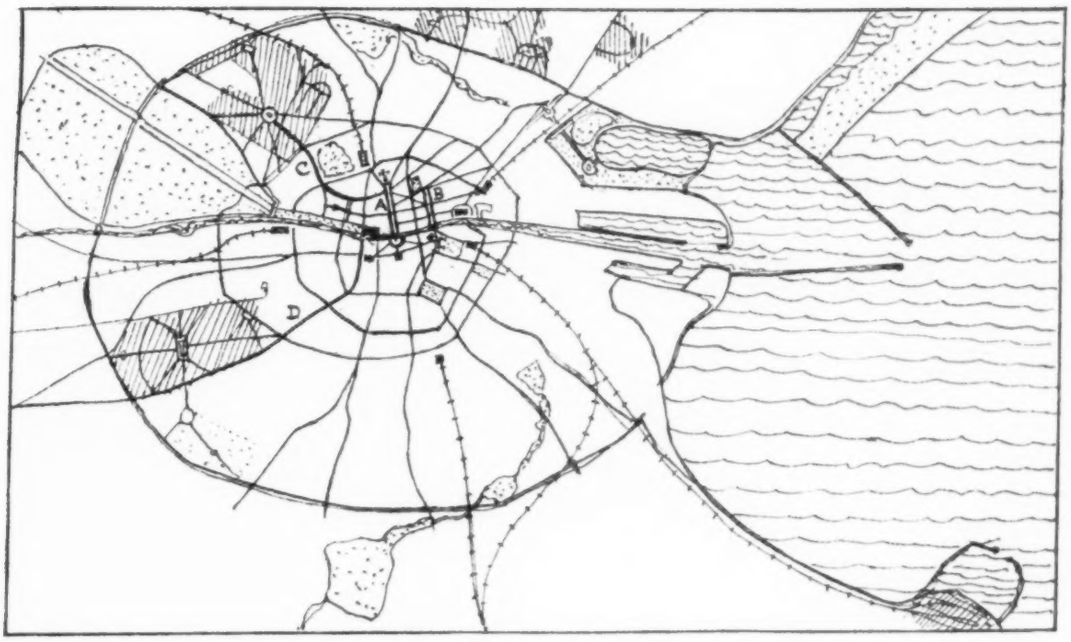
OLD WOODEN HOUSE, YPRES.—By Mr. Frank Brangwyn, A.R.A.

From the Exhibition of Lithographs at the Fine Art Society.



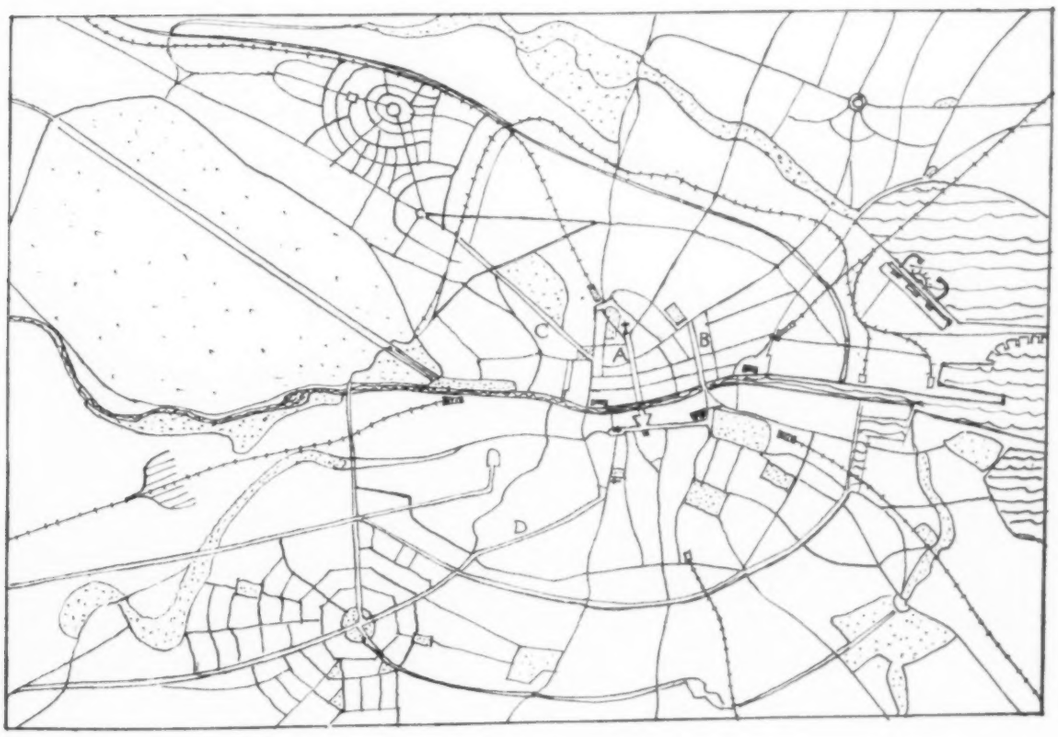
DOMINICAN CHURCH, ECCLES STREET, DUBLIN.
MR. R. M. BUTLER, F.R.I.B.A., ARCHITECT.

MUNSTER AND LEINSTER BANK, CORK.
MESSRS. ARTHUR AND HENRY H. HILL, ARCHITECTS.



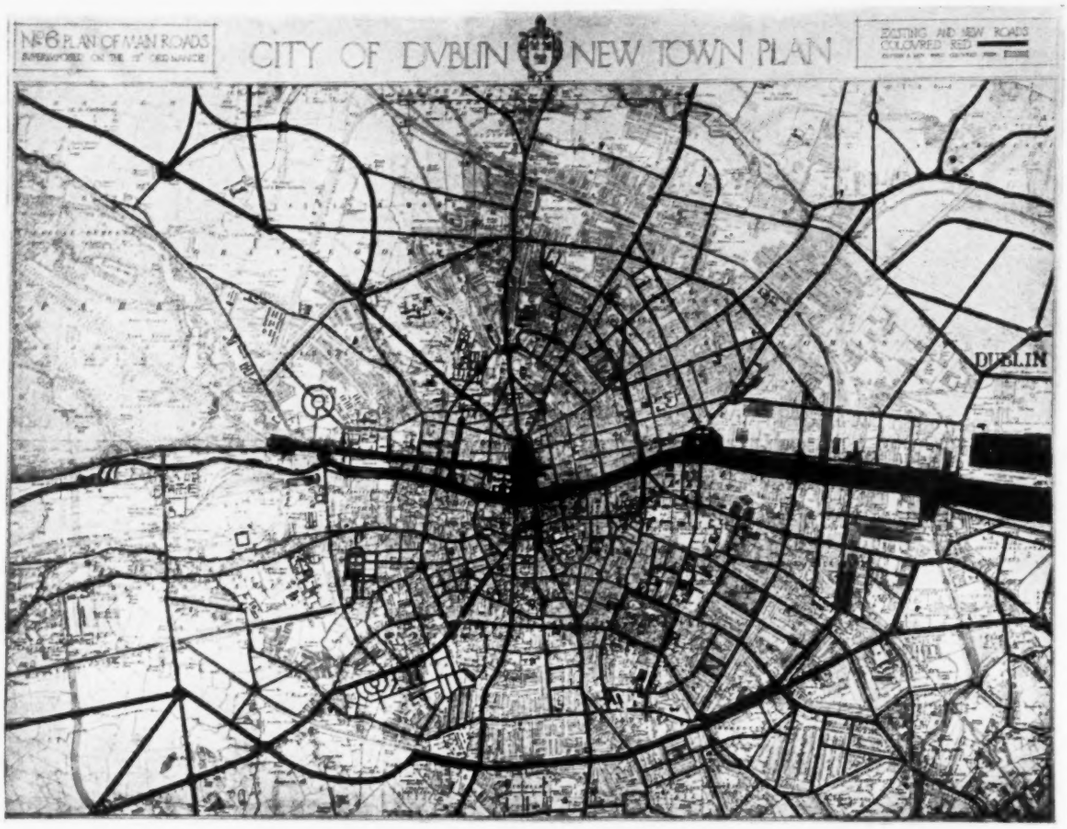
DESIGN BY MESSRS. BOGLE, BURROUGHS, PANTON AND NEWBOLD.

Reference letters—A. Capel Street, with Cathedral. B. Sackville Street. C. Cobra Avenue. D. Crumlin Avenue.

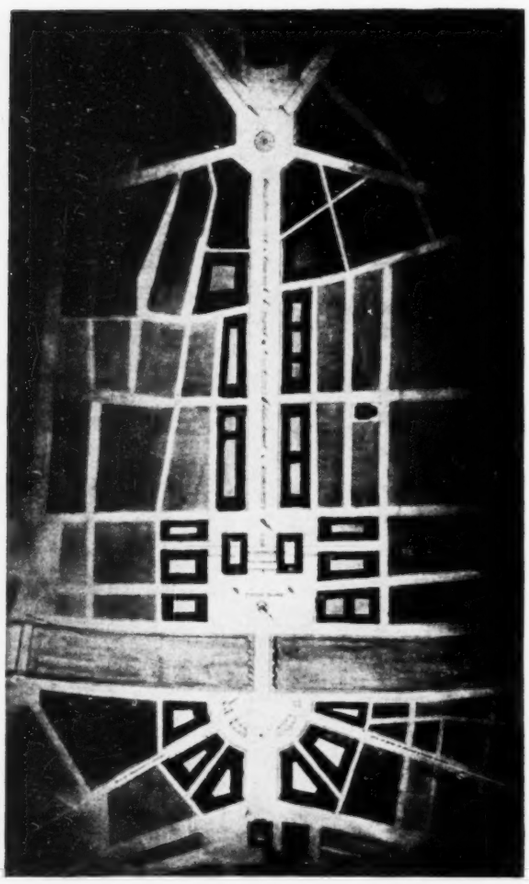


DESIGN BY MR. CUSHING SMITH.

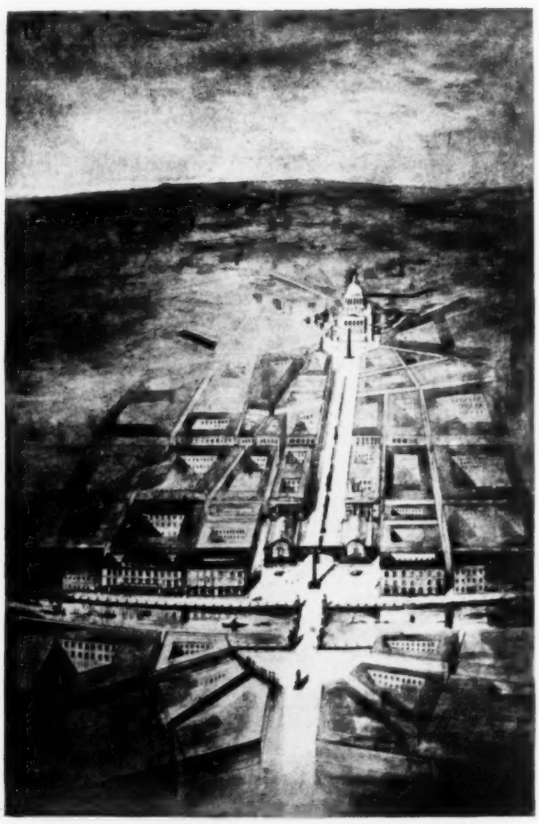
CITY OF DUBLIN NEW TOWN PLAN: COMPETITIVE DESIGNS.



No. 6.—Plan of Main Roads.



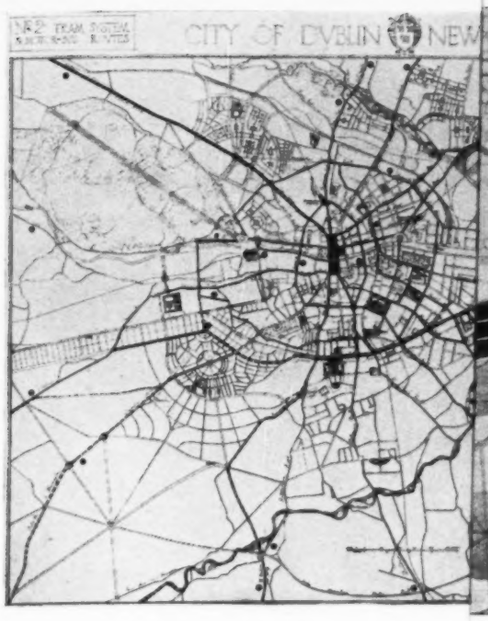
Plan of Central Area.



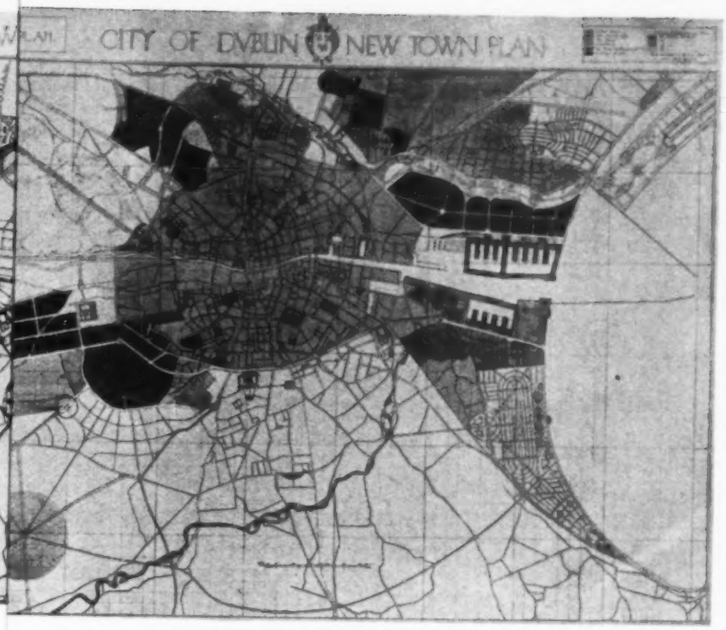
View of Central Area.

CITY OF DUBLIN NEW TOWN PLAN: FIRST PREMIATED DESIGN.

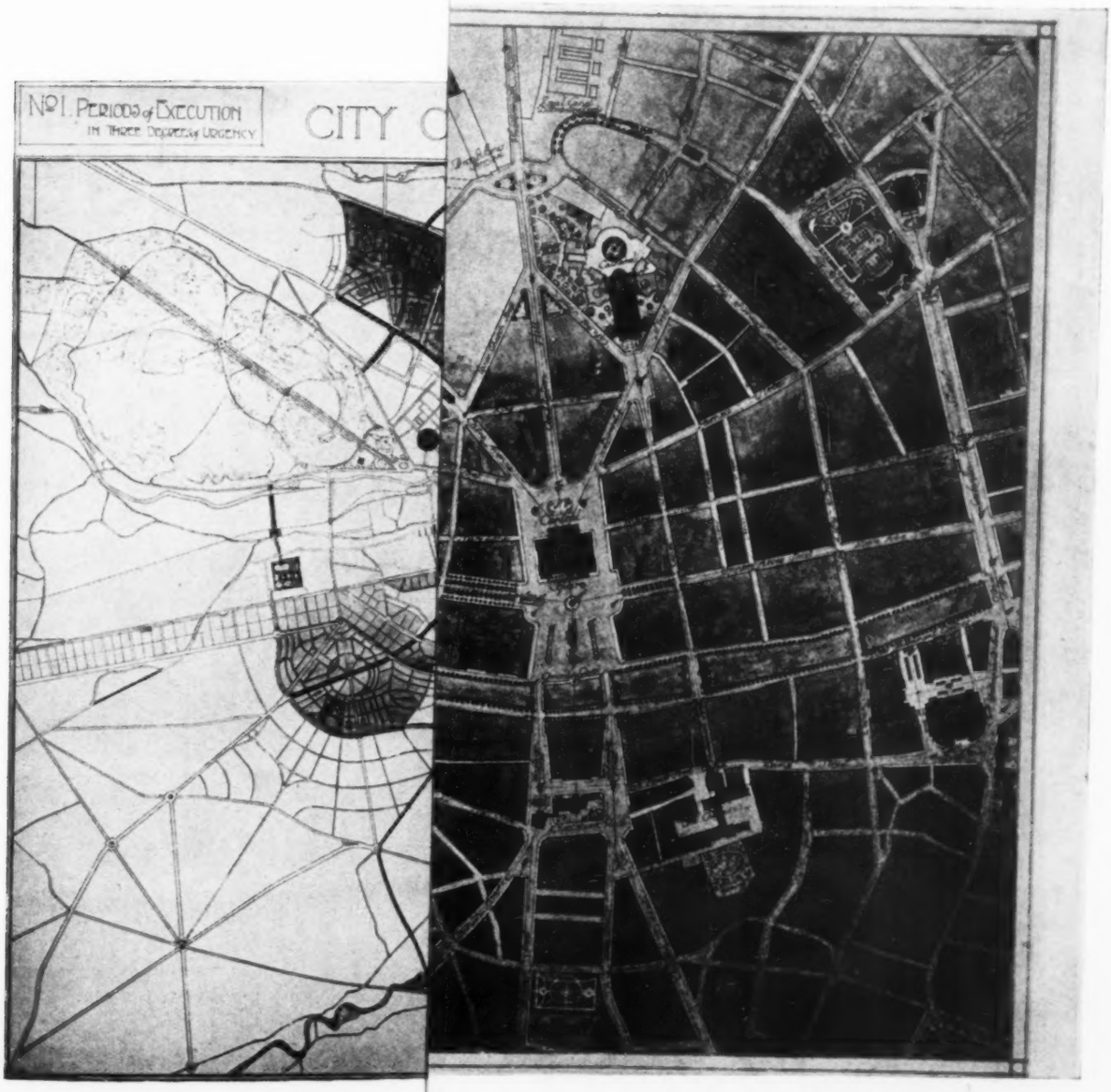
By Professor Patrick Abercrombie and Sydney A. and Arthur J. Kelly.



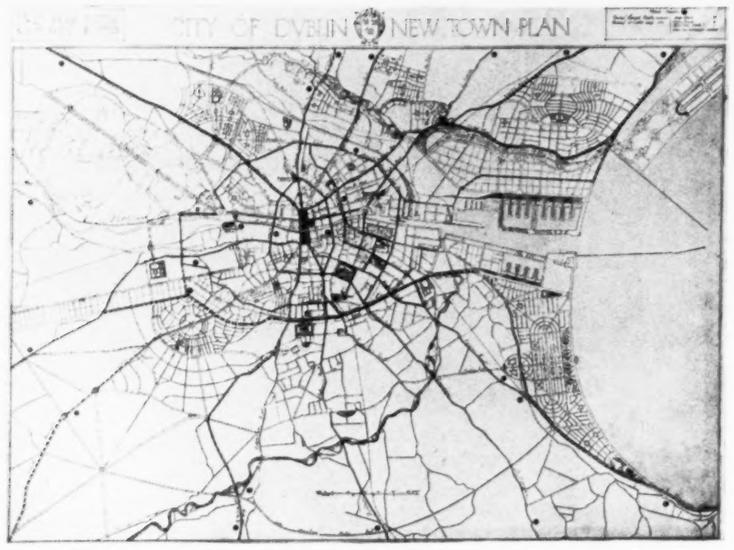
No. 2.—Tram Syst



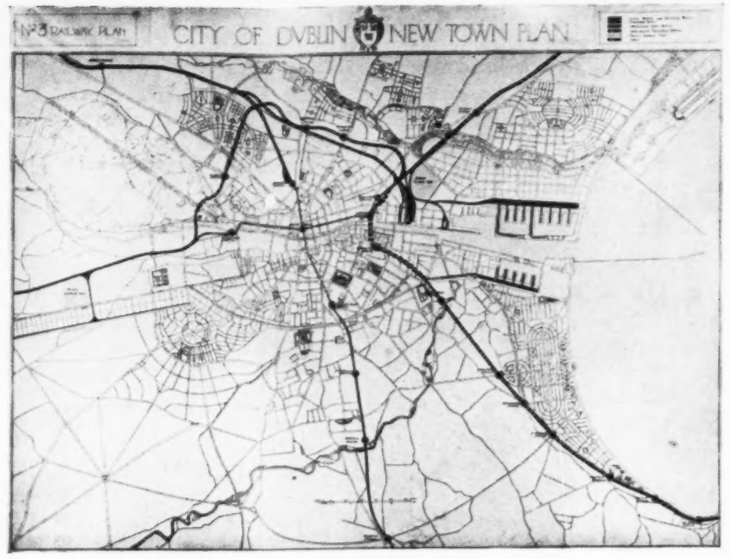
No. 4.—Zone Plan.



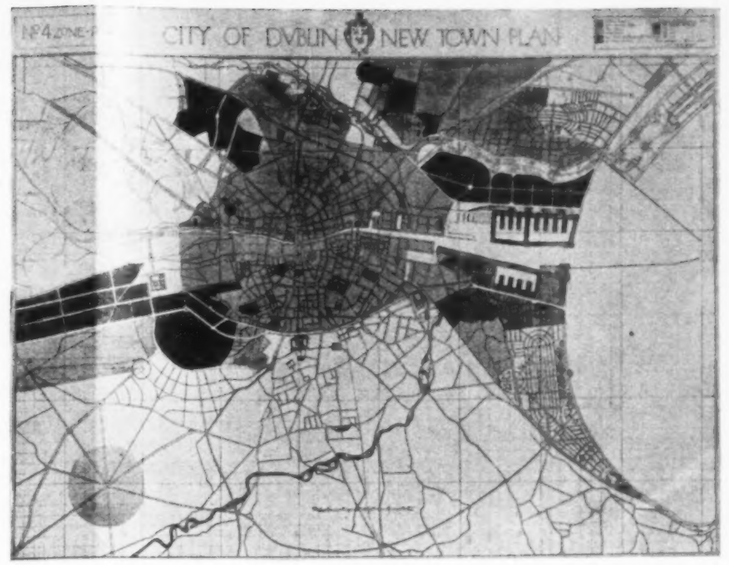
No. 7.—Detail of Central Area.



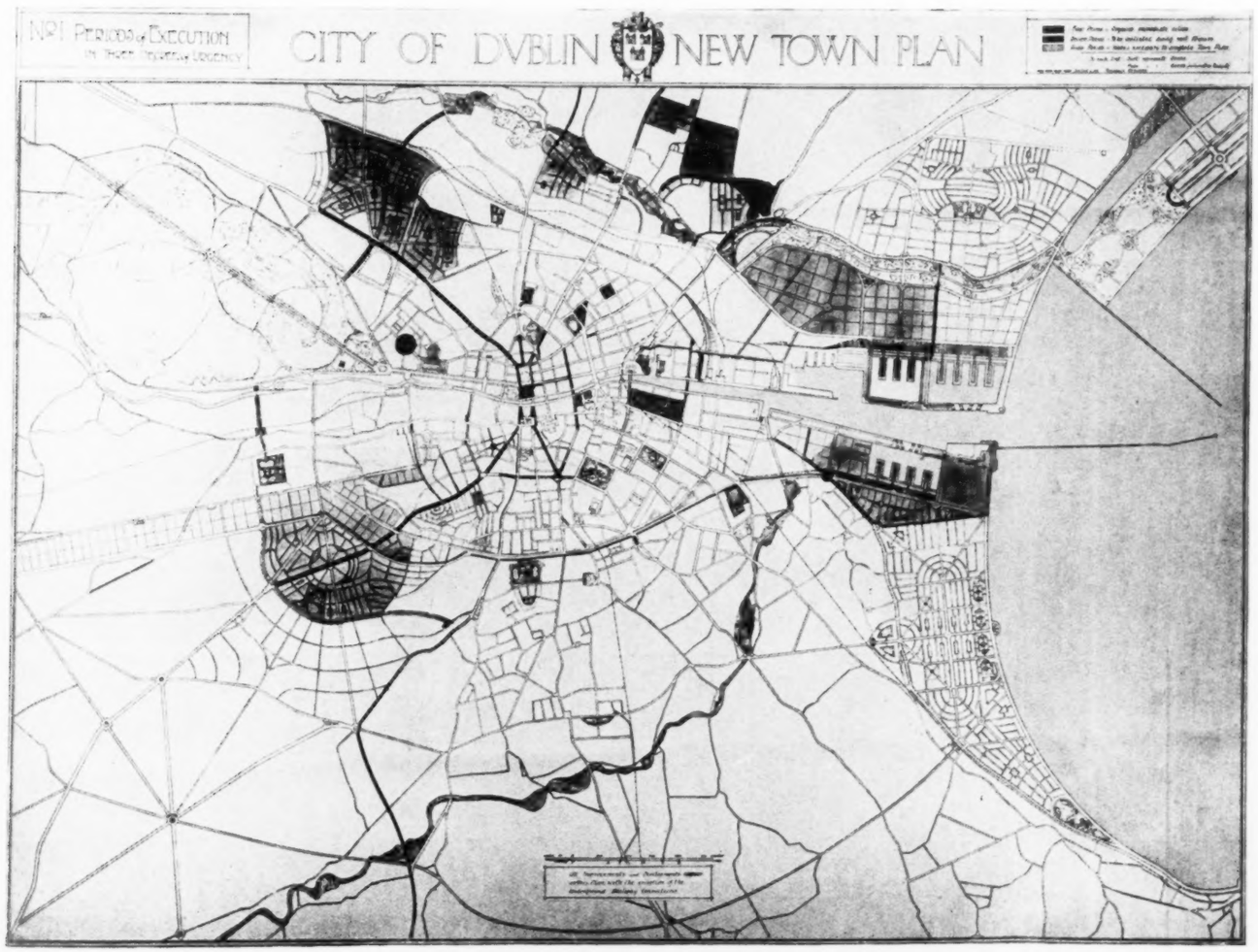
No. 2.—Tram System.



No. 3.—Railway Plan.



No. 4.—Zone Plan.



No. 1.—Periods of Execution.

No. 7.—Detail of Central Area.

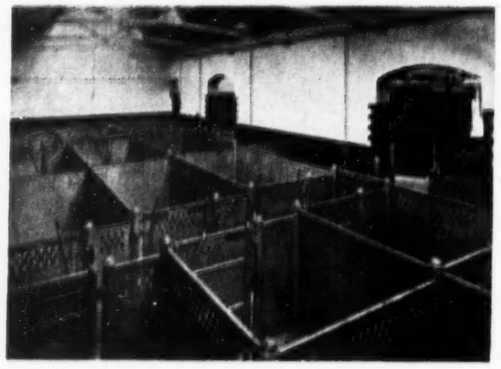
CITY OF DUBLIN NEW TOWN PLAN: FIRST PREMIATED DESIGN.

By Professor Patrick Abercrombie and Sydney A. and Arthur J. Kelly.

BELFAST ABATTOIR.

Mr. HENRY CUTLER, M.Inst.C.E., CITY SURVEYOR AND ARCHITECT.

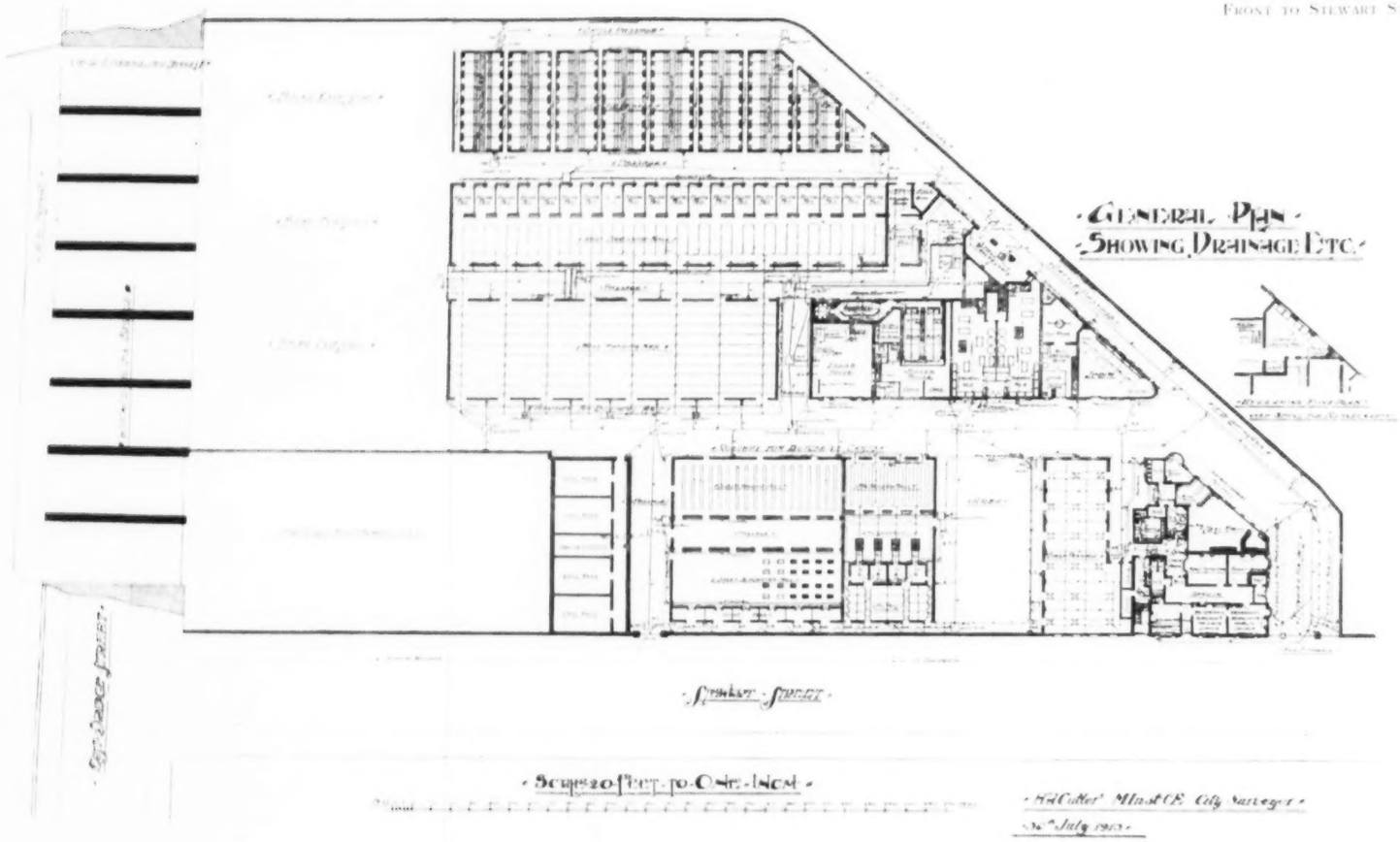
Hanging Hall for Cattle.



Pig Pens.

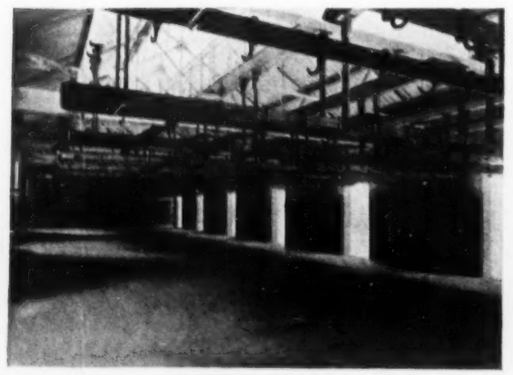
Cattle Slaughter Hall.

Front to Stewart Street.



Cattle Lairage.

Pig Slaughter Hall.



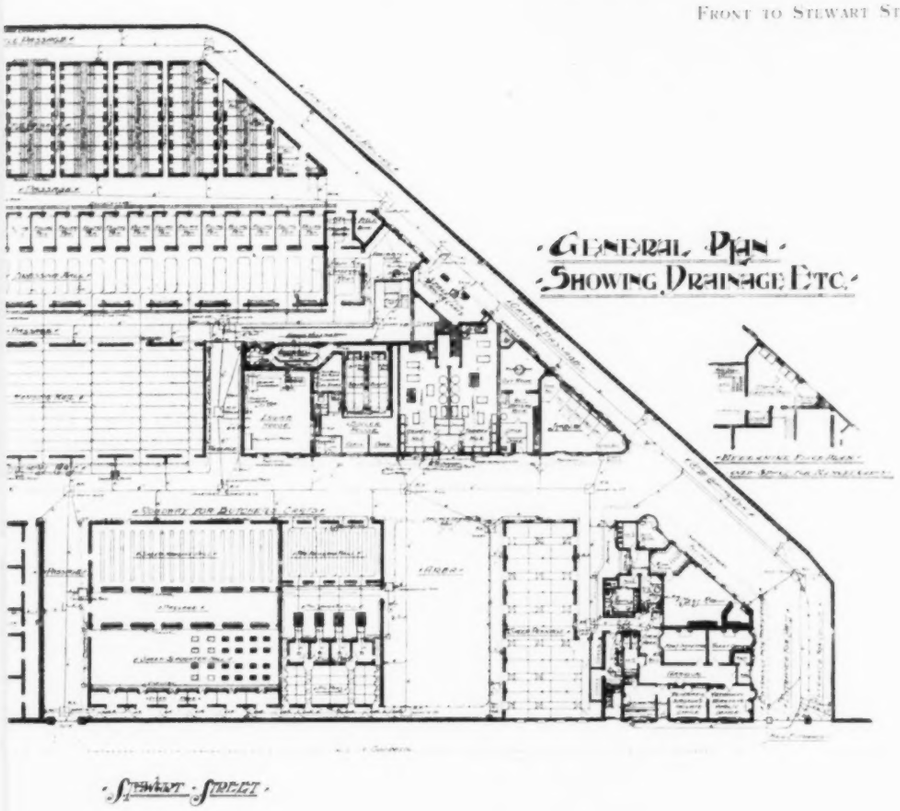
Sheep Hanging Hall.

Sheep Slaughter Hall.

TOIR.

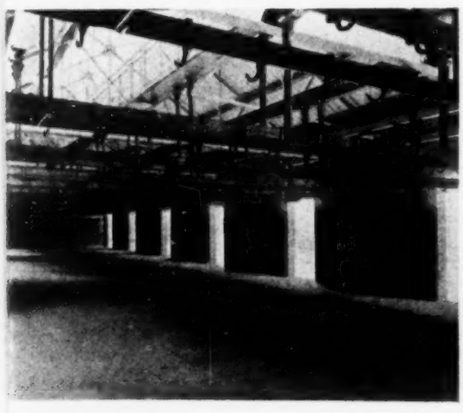
RVEYOR AND ARCHITECT.

FRONT TO STEWART STREET.



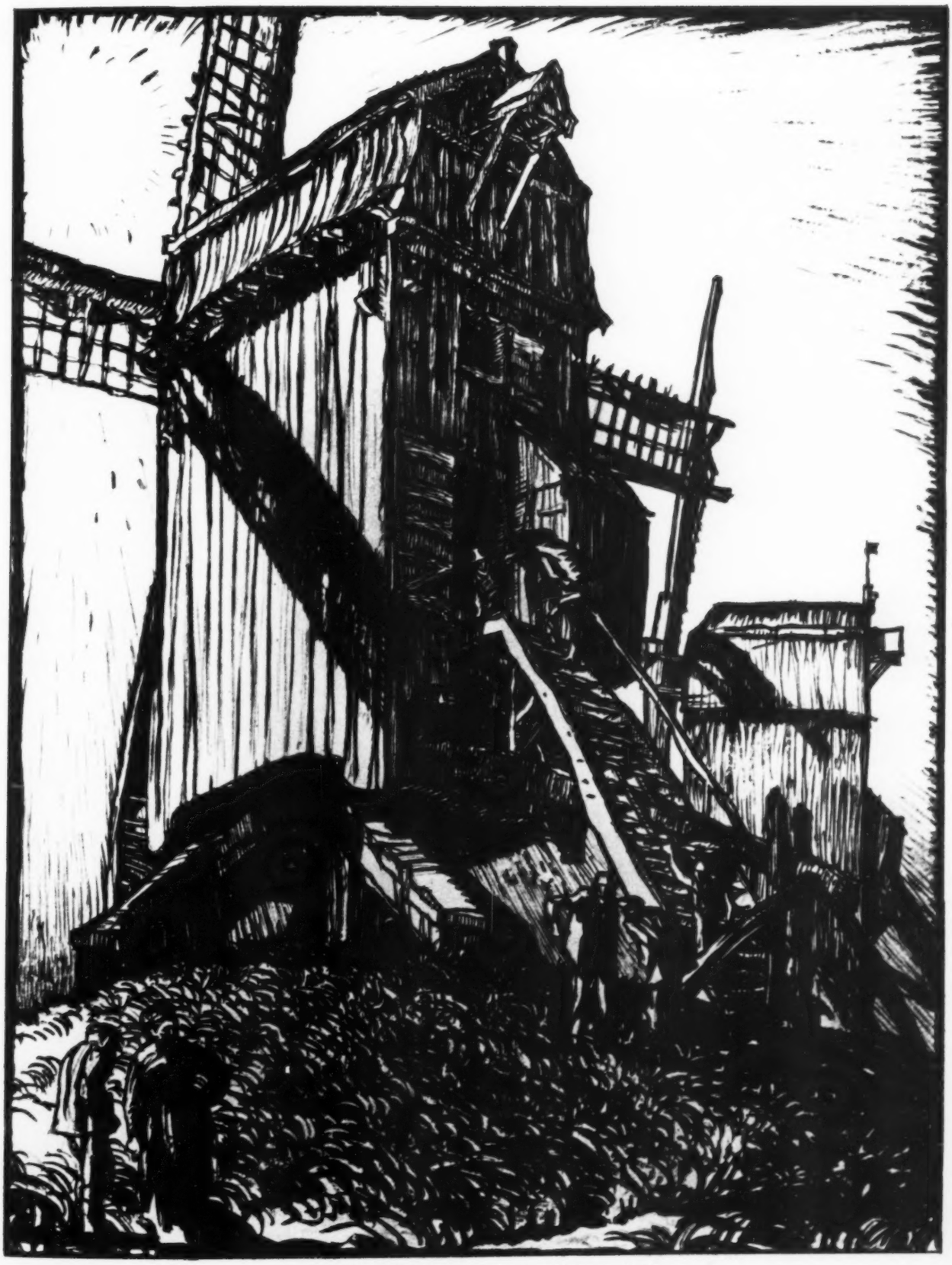
10 FEET TO ONE INCH

H.J. Cutler MInstCE City Surveyor
30th July 1913



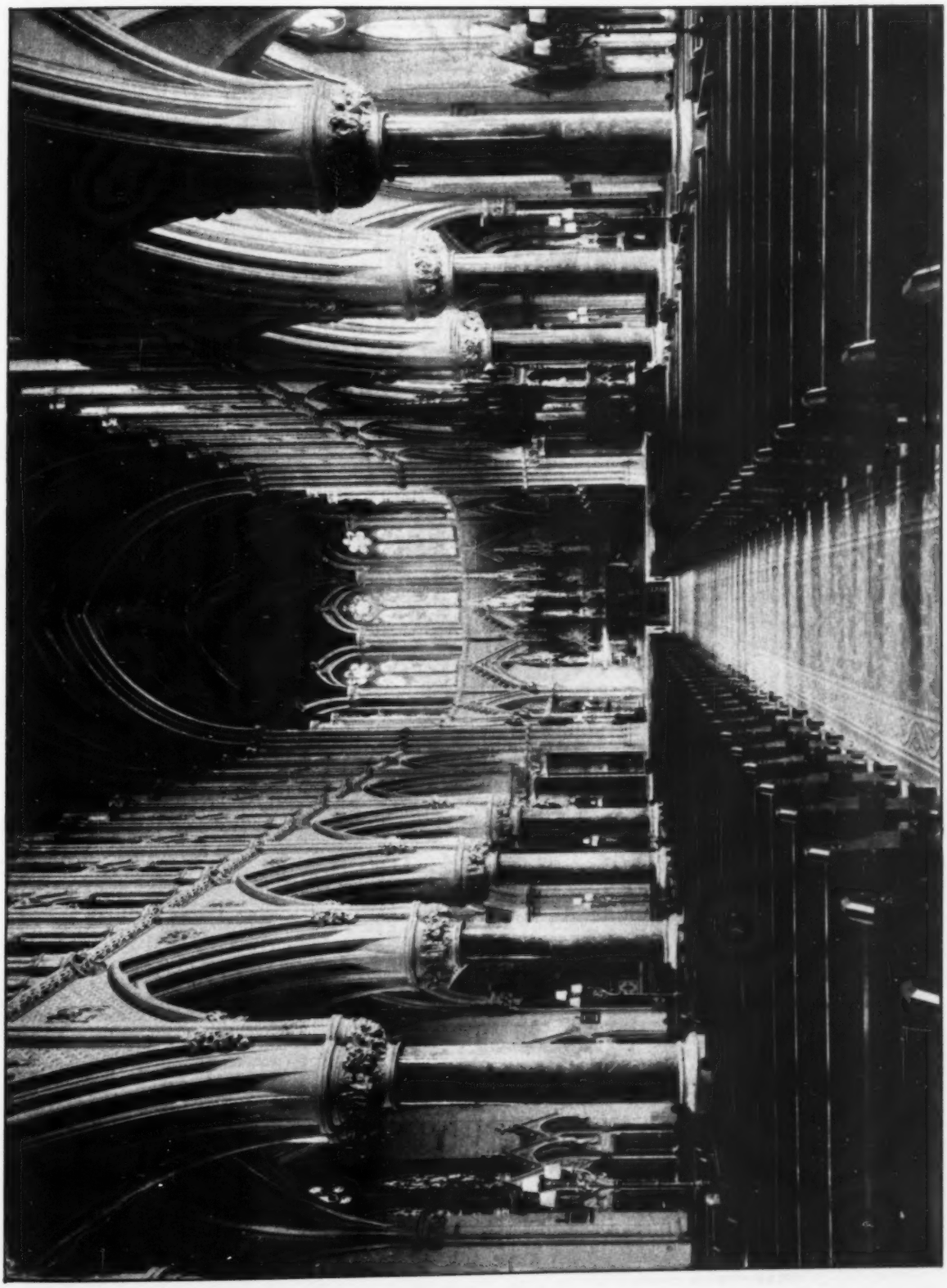
SHEEP HANGING HALL.

SHEEP SLAUGHTER HALL.



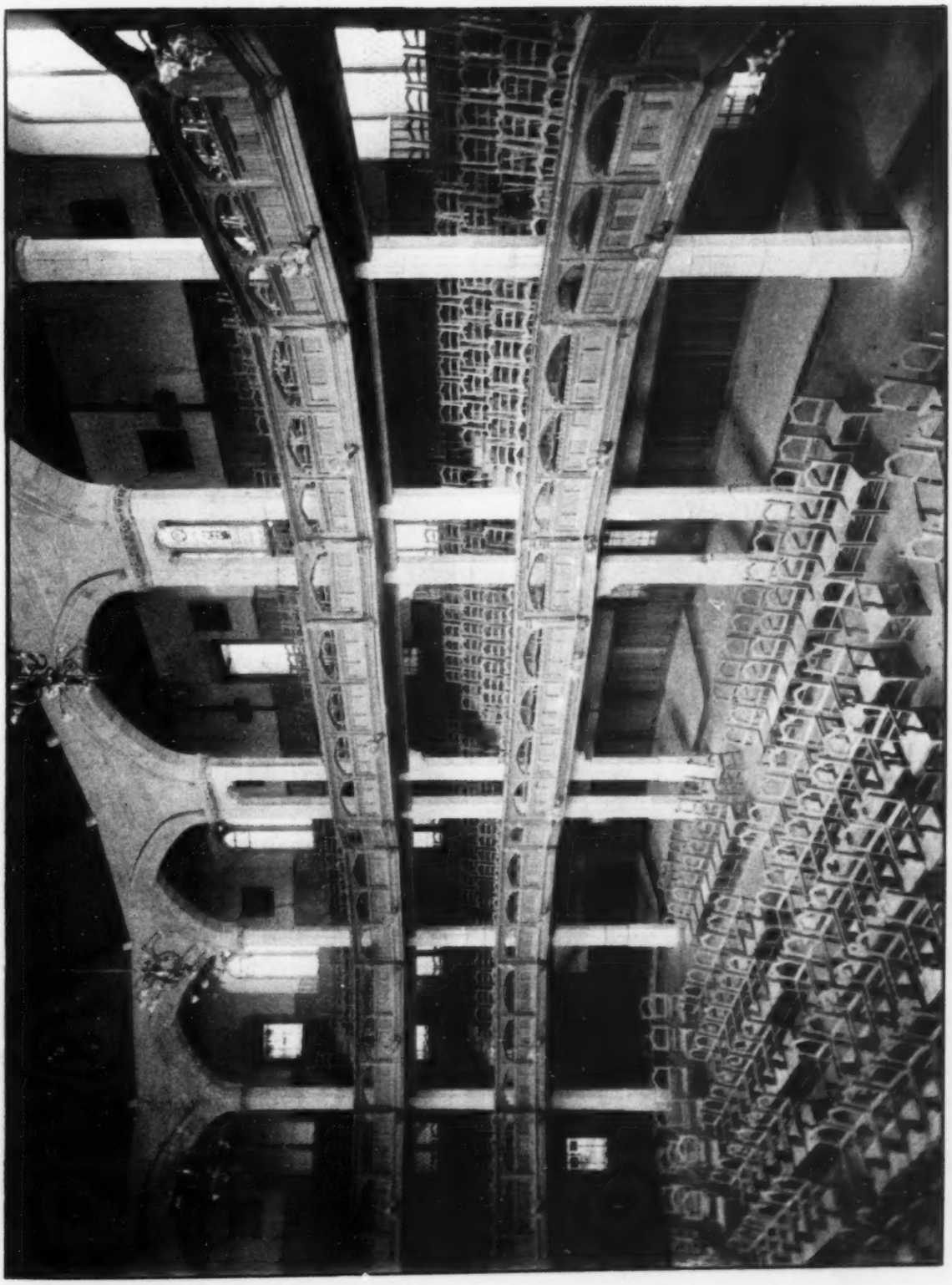
WINDMILLS. BRUGES.—By Mr. Frank Brangwyn, A.R.A.

From the Exhibition of Lithographs at the Fine Art Society



INTERIOR OF ST. COLMAN'S CATHEDRAL, QUEENSTOWN.—MR. G. C. ASHLIN, F.R.I.B.A., ARCHITECT.

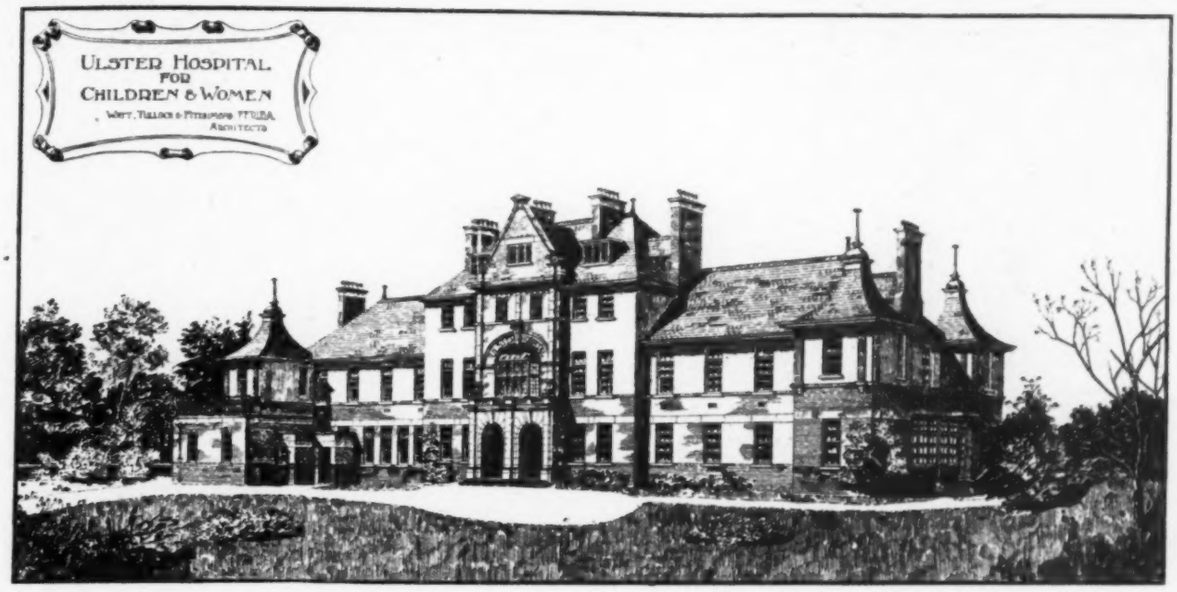
PRESBYTERIAN CHURCH HOUSE, BELFAST.—Messrs. Young & Mackenzie, Architects.

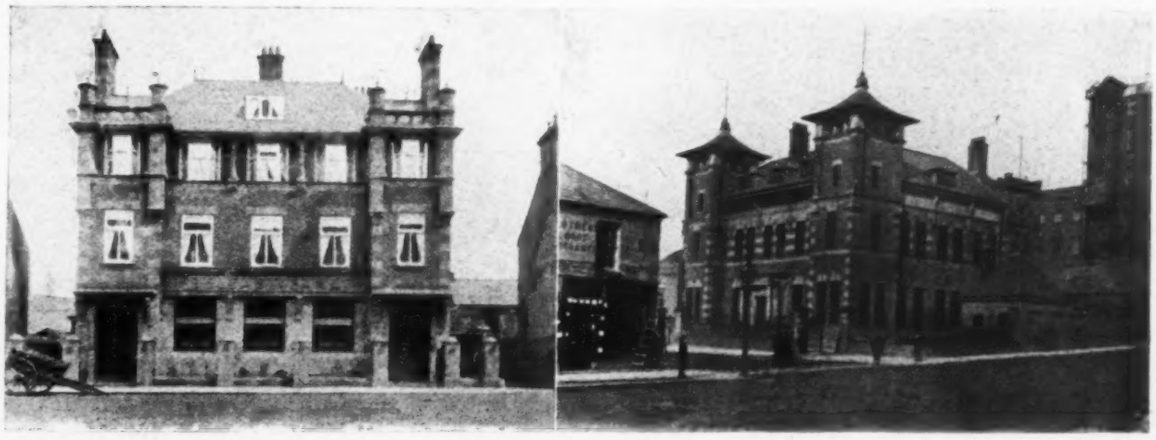


ASSEMBLY HALL, PRESBYTERIAN CHURCH HOUSE, BELFAST.—MESSRS. YOUNG & MACKENZIE, ARCHITECTS.

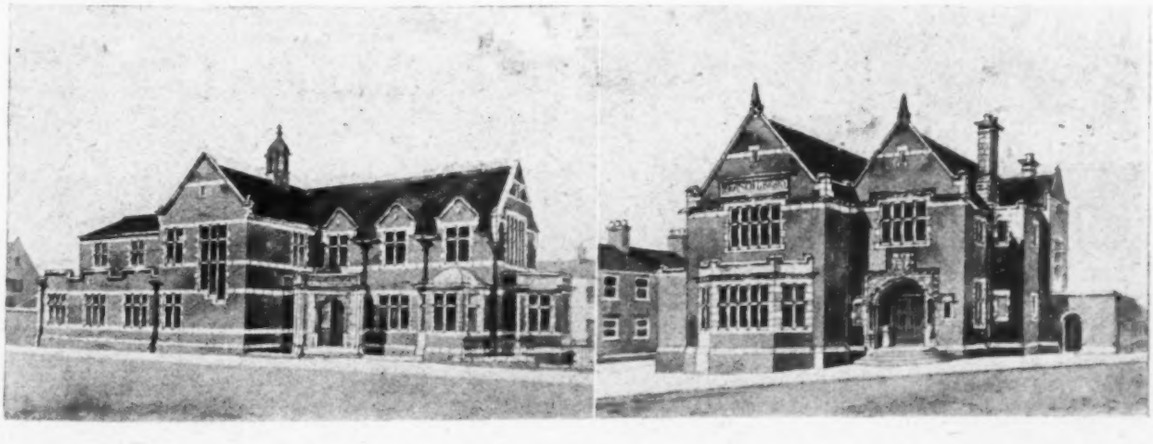
VIEW OF CENTRAL BUILDING, IRISH INTERNATIONAL EXHIBITION, 1907.—MESSRS. KAYE-PARRY & ROSS, ARCHITECTS.

ROYAL HOSPITAL FOR INCURABLES, DONNYBROOK.—MESSRS. KAYE-PARRY & ROSS, ARCHITECTS.





BANK. TOBACCO FACTORY.



CARNEGIE LIBRARIES.

Some Belfast Buildings. Messrs. Tulloch and Fitzsimons, F.F.R.I.B.A., Architects.

THE DUBLIN TOWN PLANNING COMPETITION.

ONE of the events of the past year has been the announcement of the assessor's award in the competition rendered possible by Lord Aberdeen's generous gift, which will always be remembered as a practical proof of the Viceroy's affection and interest for the land in which he held high office. The great difficulty of the problem, which could only be understood by those whose knowledge of Dublin was a very intimate one, and could only be adequately solved by a limited few, who, having that knowledge, had also studied the new science of town-planning, prevents the number of competitors from being numerous, and only eight designs in all were received—these from the following firms:

a. Messrs. Donnelly & Moore, 36, Nassau-street, Dublin.
b. Mr. Frank A. Cushing Smith, University Club, Urbana, Ill.
c. Messrs. Kaye-Parry & Ross, 48, Kildare-street, Dublin.
d. Messrs. George F. Beckett & Joseph Geoghagan, 97, St. Stephen's-green, Dublin.
e. Mr. I. S. Varian, Gamaville, Stillorgan, Co. Dublin.
f. Messrs. J. M. L. Bogle, Liverpool; A. W. Panton, Dublin; H. O. Burroughs, Liverpool; O. Newbold, Liverpool.
g. Messrs. Patrick Abercrombie, Liverpool; Sydney A. and Arthur J. Kelly, Liverpool.
h. Messrs. Ashbee & Chettle, 37, Cheyne-walk, Chelsea, S.W.

An examination of the designs submitted will convince anyone of the extreme difficulty of presenting a large town-planning scheme in a coherent and understandable manner, a difficulty which had evidently been experienced by many of the competitors, for with the exception of the winning scheme, and two, or at most three, of the others, the methods of delineation adopted render it extremely difficulty to form an accurate opinion of the relative merits of the schemes submitted. Messrs. Ashbee & Chettle's design, which was one of the designs specially commended because of the admirable report which accompanied it, is, for instance, shown on a number of separate sheets, which it is difficult to take in as a whole, and while the methods of delineation adopted have much of the charm and interest which we find in old plans and diagrams, they are unquestionably difficult to follow, and it is therefore difficult to appreciate the merits of the design.

The winning scheme (*g*), by Professor Patrick Abercrombie and Messrs. Sydney A. and Arthur J. Kelly, is in respect to its clearness distinct from any other of those submitted, while, as far as we can judge, its merits unquestionably and easily entitle it to the first place which it has been awarded by the adjudicators. It is a masterly scheme, showing the results of years of systematic study, which have enabled Professor Abercrombie to dissect the essential from the unimportant, and to give effect to a vast amount of statistical knowledge bearing on a complex and difficult problem. Although it is not suggested that any scheme can be put into execution as a whole, we believe the Corporation of Dublin will be well advised if they employ the autnors of the first scheme to advise them as to the future steps they should take to improve Dublin, already one of the most architecturally interesting and important cities in the Empire, and destined, it is hoped, to occupy a position of even greater prominence.

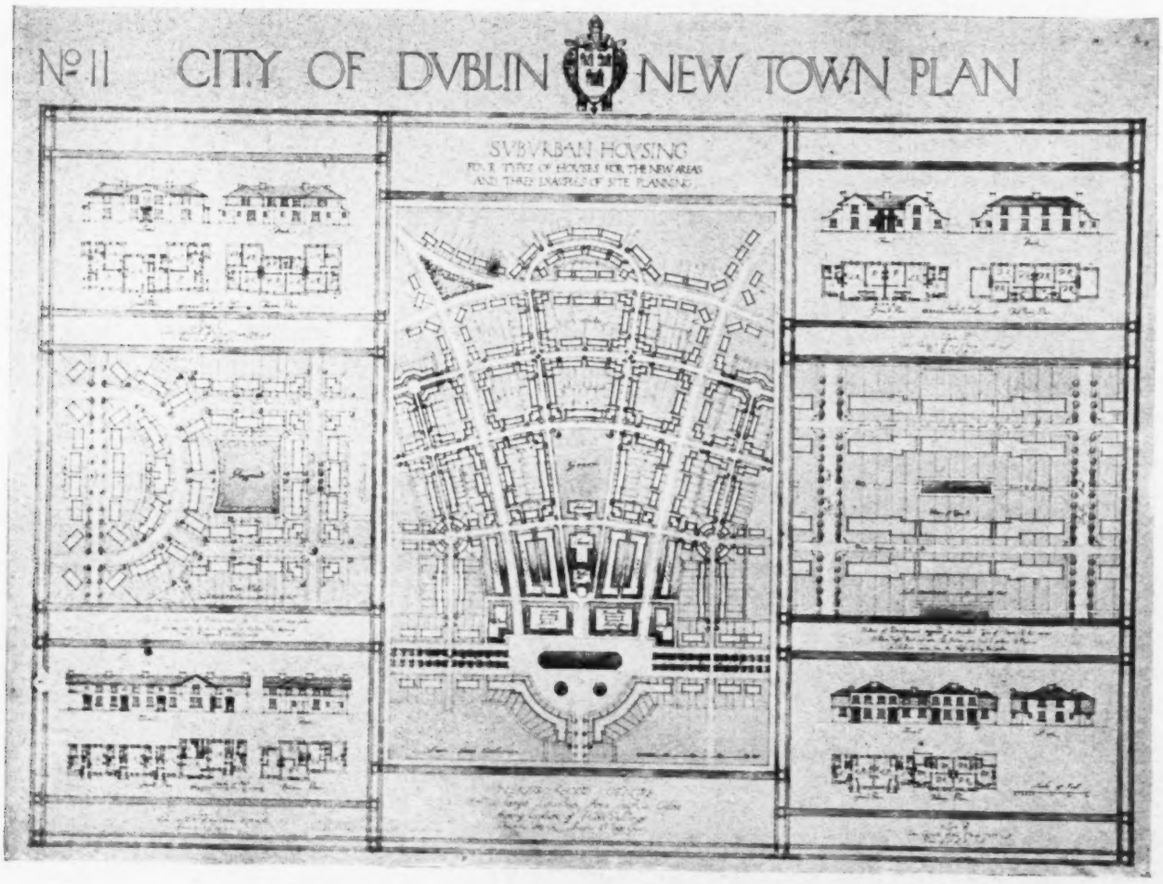
We cannot do better than to give a few points from the report of the winners, which will show the principles on which they have dealt with the problem. The main plan shows the periods in which the proposed works shown should be carried out according to their greater or lesser urgency; the subsidiary and supplementary plans illustrate special aspects of the problem, which can thus be considered on their individual merits.

Dublin to-day presents a similar spectacle to Paris prior to the operations of Napoleon III and Haussmann. It is a city of magnificent possibilities, containing features of the first order, but loosely co-related and often marred by the juxtaposition of incongruities and squalor. As in Paris, central areas which should be of first-rate commercial importance are occupied by slums, and streets of noble architectural dignity are tenement-ridden.

But, more fortunate than Paris, Dublin is to be re-modelled during a period of greater town-planning enlightenment, when architectural effect and traffic conveniences are not alone regarded as the chief essentials. Hygienic housing and adequate park provisions, those two aspects neglected by Haussmann, are now given their proper place, and these four elements will compose a city that is worthy to be the capital of a modern country.

The noble features which Dublin possesses are well known. The splendid width of Sackville-street, the expanse of Phœnix Park with its noble avenue, the sweep of the Liffey, the glorious Customs House, Dame-street with the City Hall and Castle at one end, the Bank and Trinity College at the other, the North and South Circular Roads—features which no English town possesses—these, and many isolated buildings, such as the Four Courts and King's Inns, are ready to be worked into a city plan which will bear comparison monumentally with Paris itself. The re-establishment of a National Parliament may give the necessary impetus to set a great town plan in motion, and the access of material prosperity existing in Ireland will make it possible to carry out a great scheme.

With this certainty in view, and with the knowledge of the dignity and importance due to a real capital city, the authors have not hesitated to produce a drastic town plan, in which they have made some attempt to realise the possibilities of this great city, and to provide



City of Dublin New Town Plan: Selected Design Suburban Housing.

for its anticipated shipping and industrial development. At the same time, in order to illustrate the practicability of their scheme, they have shown, as their first exhibit, a town plan in which the improvements are arranged in three stages of urgency. This explains how it might be possible to begin with certain absolute necessities, which would initiate a series of improvements, all tending to complete, by degrees, a plan of considerable boldness. If presented as a single prospect, this might appear extravagant in its thoroughness, but looked at in three successive stages (which, of course, might be further subdivided), it appears merely the exercise of sensible foresight.

Foremost among the undertakings of first urgency are shown the housing schemes for the 64,000 persons who are at present living under conditions not fit for human beings. Essential to them are certain improved transit facilities, without which the former would be unpractical. Indeed, it cannot be too insistently emphasised that the housing question is intimately bound up and reacted upon by general metropolitan improvements. To consider either separately is disastrous. This has been done from both standpoints. In the earlier American projects, in the executed plans of Vienna and Paris, metropolitan planning of the most gorgeous description was considered and realised without any relation to the life or home of the individual. Conversely, in England, numerous housing schemes, notably those of the London County Council and Liverpool, have been carried out as though they were isolated phenomena — as though a physician were to attempt to cure a body permeated with a scorbutic disease by applying a soothing salve to a few of the sore places that happened to be noticeable on the face and hands. A single and very elementary instance from the plan of Dublin may be mentioned. The Dominick streets, it is known, are streets tenement-ridden, but wide and spacious. The normal British way is to consider them merely as overcrowded areas, and after removing, by some means or other, the surplus population, to rehouse it sanitarily elsewhere. Humane, but one-sided. The radical method is not only to deal with the overcrowded area, but treat the street as well; it is, perhaps, more seriously diseased than its buildings. But by cutting it through the river and across into Dane-street, the artery is given useful functions—it becomes an important approach to a railway station and new blood flowing along its course revivifies all its riparian cells. Here, then, is a single instance of housing and town-planning working hand in hand. Similarly, if large numbers of people are to be housed on the cheap land outside the crowded area, they must be able to get quickly and cheaply to and from their work.

The two salient features, other than these immediate housing requirements of the town plan as proposed, are a new city centre for the streets and an extensive scheme for reclamation of flats from Dublin Bay. With reference to the former, the schematic street diagram will explain that the Nelson Pillar in Sackville-street is no longer the hub of the tram system; it indeed falls outside the utilitarian traffic web and drops into its right place as a monumental "Avenue de l'Opéra." The new centre on the North bank near the Four Courts and on the South near Christchurch determines itself naturally as the objective, at present thwarted, of the greater number of radial roads. The centre of the road system is also the centre of the railway system. The general effect of this re-arrangement and focusing of communications will be to restore to the North bank an equal importance with the South. One might suggest that as, as in Paris, the South bank contains the legislature and seats of learning, the Dublin that is the capital of Ireland, so the North bank is to develop as the prosperous business and commercial town; it has also the new Catholic Cathedral and the group of cultural buildings at the top of Sackville-street.

The reclamation of a large tract from Dublin Bay appears at first a rash proposal, but, as indicated on the period plan, the northern area is of greater plausibility than the south. Indeed, the former is inevitable, and a completely equipped industrial community will grow up as a result, with docks backed by work sites; these, the work areas, separated by a wide park belt from the residential quarter, which creeps up the gently rising ground facing the south. The sweep of Dublin Bay, as a result of these reclamations, is extremely fine, with its two enclosing headlands, the added interest of the low-lying "North Bull" playground and the gigantic power citadel at the centre of the arc, symbol of the economic sameness of the modern city.

For the rest, the authors have not attempted to plan out in detail a city of two or three million inhabitants—a size Dublin may easily attain to in the near future. In the outlying areas surrounding the present town, with the exception of the three specific sites to take the present overcrowded population, and the suggested industrial garden suburb of Clontarf, only the main traffic lines have been indicated; these and a possible outer park belt are all that are necessary at this stage. To plot out a vast circumambient town in detail may look attractive on paper, but is absolutely useless and even may prove pernicious, leading to the enforcement of detailed planning which by the time it comes to be executed is already antiquated.

Before entering into the general details of the report it must be stated that any recommendations must be looked upon as tentative, and that no work should be commenced without a thorough system of investigation, by means of a local survey, which would provide the necessary information which unfortunately has not been divulged to the competitors.

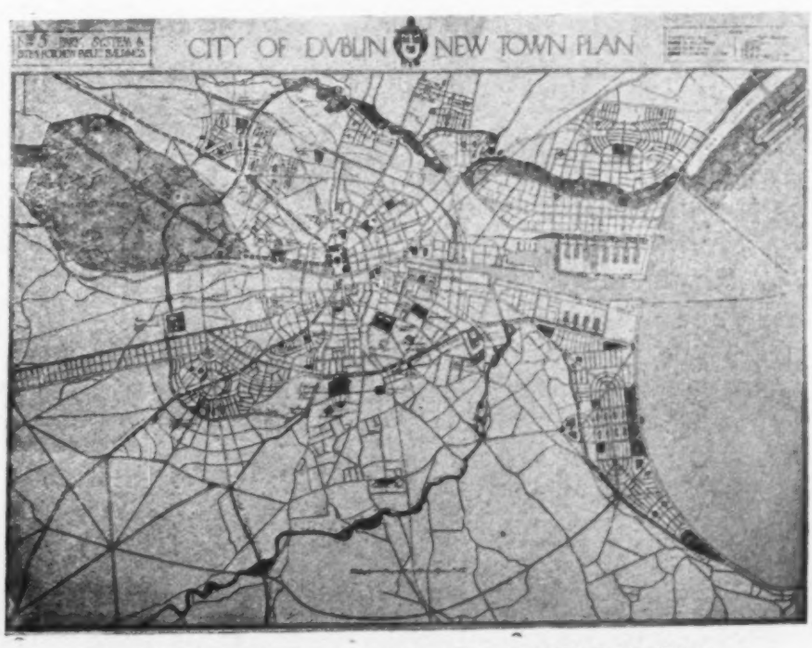
This survey would deal with the density of traffic, its location and duration at various hours in the day, and by means of a traffic count give accurate information as to the volume of traffic and calculate its density in the various areas. Such a survey would be instigated on the instructions of a Town Planning Commission, and it is recommended here that a committee be formed consisting of a recognised authority on town planning, the City Surveyor or Engineer, a barrister and a representative of the local Chamber of Commerce, who, together with the Medical Officer of Health, would form the Housing and Town Planning Board.

The general town plans submitted by Mr. Cushing Smith and Messrs. Bogle, Burroughs & Co., bear many striking resemblances to the winning design. Both of them suggest the location of new housing areas at Crumlin and Cabra, and both of them connect these new areas with avenues carried towards the centre of the town. Mr. Cushing Smith's two avenues, Cabra and Crumlin, are almost precisely on the same lines as the winning design, and all three make use of the possibility of bringing in a wide tree-planted avenue to the centre of the town across the land at present occupied by the institutions in the neighbourhood of Grange Gorman. Mr. Cushing Smith's plan bears an even more striking resemblance in the detailed location of the Crumlin and Cabra areas and in their detailed treatment. The neighbourhood centre of Crumlin is on almost precisely the same point and his parkway connection very similar.

Another feature is the Cathedral site, which must almost be one of the dominating features of the new plan. All three competitors select precisely the same spot, the rising ground between Dorset-street and the King's Inn, the Cathedral being placed on the direct axis of the City Hall and Capel-street; but whereas the two mentioned designs enlarge Capel-street and make it a monumental civic centre, it will be noticed that the winning design creates a traffic centre somewhat to the west of this, leaving Capel-street untouched except at the Cathedral end. The effect of the new traffic centre of the winning design, situated on the site of the Ormond markets and the derelict property near the Four Courts, is to create a definite spider's web arrangement at a centre point which is somewhat hinted at in the other schemes. All three schemes make the new centre to the west of Sackville-street.

In one point the two mentioned competitors are at one, and at variance with the successful design. They both of them retain the bay at the back of the Alexandra Basin as an ornamental sheet of water, acting as a foreground to the pleasant suburb of Clontarf. The winning design, however, suggests the reclamation of the whole of this bay, and its development as an industrial area, owing to its proximity to the docks and warehouses. The effect on Clontarf would, of course, be by no means so attractive, but it is suggested that a broad park belt, along which the Tolka Brook flows, would separate the residential from the industrial area and that Clontarf would become a large workingman's suburb.

Other points of resemblance between these three schemes are to be noted in the park provision. All three suggest parkways from the Tolka and the Dodder, Messrs. Burroughs' scheme adding a large park to the south of the Rathfarnham demesne. It would appear doubt-



Plan No. 5. Park System and Sites for New Public Buildings.

ful, however, whether a large public park is required in this very aristocratic neighbourhood.

An ingenious feature of the central proposals of Messrs. Burroughs & Bogle's scheme is the crescent on the south bank of the main Capel-street axis. Standing at the end of Grattan Bridge, it would be possible in this scheme to see at once the Four Courts, Christ Church, the Cathedral, the City Hall, the new Cathedral, the Bank, and the Customs House. Whether these view points justify the creation of radiating roads in order to obtain them is a question, but the ingenuity and effectiveness are very striking. In this plan many of the detailed suggestions of road improvement and a central area bear witness to a close knowledge of the needs of Dublin, but some of the main roads, particularly one midway between Capel-street and Sackville-street, and another from Amiens Station, appear to cut across somewhat harshly the natural road plan of the town. It will be seen, however, that a portion of the former from Liffey-street into Dame-street coincides with the suggestion made by the successful design, and Messrs. Kaye, Parry & Ross. This consistency of opinion, reinforced as it is by the deep local knowledge of the last-named competitor, would suggest the strong advisability of this new link of north with south, even though it means the destruction of one important frontage in Dame-street.

As to railway connection, this does not appear to be dealt with on the three drawings submitted by Mr. Cushing Smith, but Messrs. Burroughs & Bogle show a system of underground connection with the central station, which again is on very similar lines to the winning design. They, however, do not show the cross connection from Broadstone to Harcourt-street, which is certainly of secondary importance. Their freight yard is placed on the south side of the river contiguous to the Grand Canal Dock, whereas in the winning design it is placed on the north to the east of the mass of lines which descend to Amiens-street and the North Wall Stations.

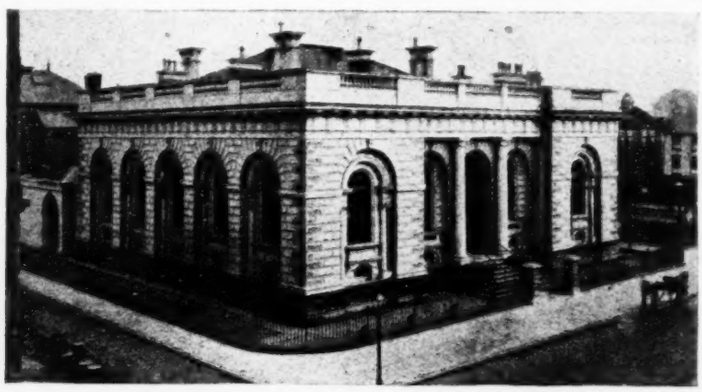
The connection between the centre of the town and Phœnix Park is effected by Messrs. Burroughs & Bogle by a broad park strip following the line of the Liffey as far as the Four Courts. In the winning design, a straight avenue is taken past the Four Courts to join the traffic centre.

Mr. Ashbee's scheme is chiefly notable for the very suggestive report in which the author outlines many of the directions in which research should be made during the preparation of a civic survey. His scheme is somewhat inefficient, and particularly the general plan is of a rather sketchy nature, but his Cathedral site is quite distinct from the foregoing ones, and is situated at the head of an axis, which is taken at right angles to the front of Amiens-street Station (the line of one of the traffic roads proposed by Messrs. Burroughs & Bogle), the Cathedral being set at the angle between Summer-hill and Gardiner-street. There does not, however, appear to be very much logical significance in this opposition of the Cathedral to a railway station.

The design submitted by Messrs. Kaye Parry & Ross is chiefly remarkable for the very careful study of detailed housing problems which it displays. Methods of remodelling existing tenements are shown, and a valuable plan in the nature of a survey of derelict spaces and tenement property is shown. This is taken from a large plan which was prepared by the authors for the Civics Exhibition of 1914, and it really forms the first achievement in the direction of a systematic civic survey.

As has been pointed out, several of the schemes submitted are extremely hard to follow, partly because their authors have not grasped the method of rendering their schemes easily readable—a very difficult matter involving the familiarity only gained by continuous practice in solving similar problems, and partly also due to the large area covered by Dublin and the very complex conditions affecting its extension. The main defects of the city as it exists are: firstly, the deplorable state of the dwellings of the poorer classes of workers; secondly, the scattered position of buildings of the first importance—the absence, so to speak, of any existing city centre; and thirdly, the want of through connections between the railway terminal points. As against these Dublin possesses unusual advantages in its well-developed tramway system and outlying circular roads, so much needed in many of our growing centres, but in Dublin for the most part ready-made. As the winners point out in their report, all that is required in Dublin is to complete the facilities given by the addition of comparatively few links and connections. Taken as a whole, the citizens of Dublin may congratulate themselves that it was mainly laid out in the great days of the eighteenth century, and has not suffered to any great extent by the mistaken and shortsighted policy of those who designed our nineteenth century towns, or rather, we should say, allowed them to "plan themselves," for though much remains to be done, comparatively little must be undone, and an unique opportunity exists to add, to the architectural glories which characterise the eighteenth century, the skill and science which will, we hope, make this century a new era of orderly and well thought out development.

Harbour Offices, Belfast. The late W. H. Lynn, Architect.



Northern Counties Bank, Belfast. The late Sir Chas. Lanyon, Architect.

New City Hall, Belfast. Sir Brumwell Thomas, Architect.

British School at Athens.

It is stated that Mr. Wace, Director of the British School of Archæology at Athens, has arranged to place the school buildings and property in charge of the Director of the American School in the event of his departure from Athens.

DATA RELATING TO THE CHURCHES

BUILT IN THE LAST FIFTY YEARS IN SOME OF THE CATHOLIC DIOCESES IN IRELAND.

Our readers will, we believe, be interested in the following data with regard to the churches built in several dioceses in Ireland within the last half century. We are able to give these particulars through the courtesy of the authorities, but we do not necessarily endorse any expressions of opinion as we have not had the opportunity of seeing all the works mentioned.

DIOCESE OF DUBLIN.

NOTE.—Three classes of work are distinguished: (1) Original Building; (2) Extension; (3) Completion.

Extensions include works providing extra accommodation, such as new aisles, transepts, apse.

Completion includes such structural works as towers, porches, porticoes, belfries; and such internal fittings as altars, communion rails, galleries, &c.

Structural completions are distinguished by the letter A.

Internal fittings are distinguished by the letter B.

SUMMARY OF COST.

Amount expended on City Churches (in charge of the Secular Clergy)	£190,899
Amount expended on Suburban and Rural Churches (Secular Clergy)..	£299,471
Amount expended on Churches in charge of Religious bodies.. ..	£261,464
	£751,834

This does not include private chapels or domestic oratories of religious communities of men or women.

Account was taken of Public Churches only—built, extended or completed since 1866—fifty years ago.

CATHOLIC POPULATION OF DIOCESE.

	In 1881	In 1911
Diocese of Dublin	389,505 ..	434,586

CITY PAROCHIAL CHURCHES

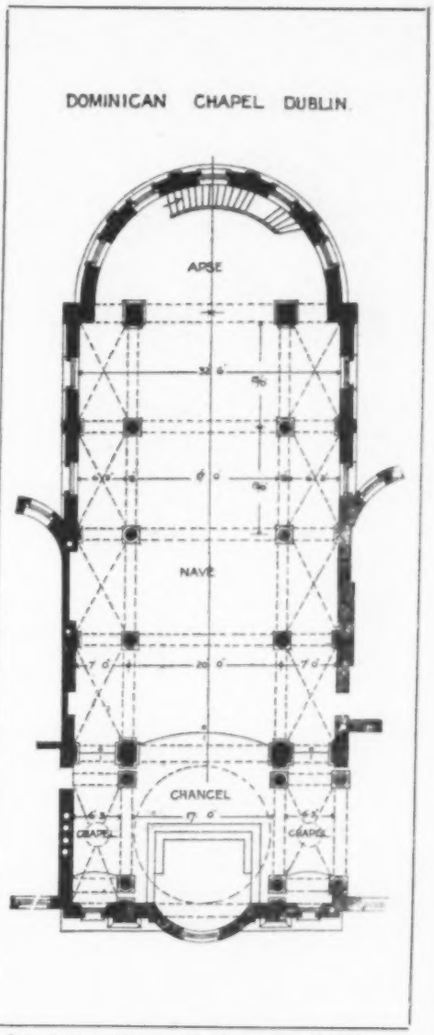
Church.		£
Temporary Church of Our Lady of Lourdes (Pro-Cathedral Parish)	Cost, £5,051; Built, 1915	5,051
St. Andrew's	Completion A., £2,400	2,400
Holy Cross Church, Clonliffe ..	Cost, £22,000; Built, 1873-76	22,000
City Quay Church	Completion B., £1,880	1,880
St. Agatha's	Cost, £23,666; Finished, 1908	23,666
St. Andrew's	Completion A., £7,490; 1898	7,490
St. Columba's	Cost, £20,920; Built, 1903-6	20,920
Holy Family	Cost of original structure, £11,500; Built, 1874	23,500
	Extension (transepts, aisles, &c.), £12,000; 1903	
St. James's	Completion A. and B., £2,149	2,149
St. Joseph's	Cost of original structure, £30,000; Built, 1875-80	31,500
	Completion A. and B., £1,500	
St. Kevin's	Cost of original structure, £20,000; Built, 1869-72 ..	20,000
SS. Michael and John's	Completion A., £1,842 } £2,492	2,492
	,, B., £650 }	
St. Michan's	Extension £6,100, made 1892-1914	11,395
	Completion A., £2,039 } £5,295	
	,, B., £3,256 }	
St. Nicholas of Myra	Completion A., £350 } £1,656	1,656
	,, B., £1,306 }	
Our Lady of Dolours	Cost, £10,400; Built, 1890-93	12,100
	Completion B., £1,700	
St. Paul's, Arran Quay	Completion B., £2,700	2,700
		190,899

CHURCHES OF RELIGIOUS COMMUNITIES IN DIOCESE OF DUBLIN.

		£
Augustinians, Thomas-street	Total cost, £68,809; Built, 1862-95	68,000
Calced Carmelites, Whitefriar-street ..	Completion A., £1,000	8,205
	,, B., £4,205	
Discalced Carmelites, Clarendon-street ..	Extensions, 1869-75; £5,100	9,454
	Completion B., £4,354	
Capuchins', Church-street	Cost of original structure, £60,000; Commenced, 1868	64,308
	Extension, £4,308	
Dominicans, Dominick-street	Extension, £7,000; 1894-8	18,050
,, Tallaght, Co. Dublin.. ..	Cost of original structure, £10,000	
	Completion A., £1,000	
,, Athy, Co. Kildare	,, F., £50	
Franciscans, Merchant's Quay	Extension £2,600	6,600
	Completion A., £2,000	
	,, B., £2,000	
Jesuits, Gardiner-street	Extension £9,900	11,600
	Completion B., £1,700	
Oblates of M.I., Inchicore	Cost of original structure, £8,309; Built, 1876-8 ..	18,770
	Extension, £10,470; 1892-1903	
Passionists, Mount Argus	Cost of original structure, £20,000; Built, 1873-8 ..	21,500
	Completion A., £1,500	
Vincentians, Philsboro'	Extension £16,963 Built 1902-16	34,977
	Completion A., £14,214 1902-16	
	,, B., £3,800 1909-16	
		261,464

SUBURBAN AND RURAL CHURCHES.

Parish.		£
Castletown Church, Arklow	Original cost, £2,700; Built, 1881..	2,700
Ashford Church and	Original cost, £3,230; Built 1915-6	7,230
Glenealy Church	Cost, £4,000 ,, 1868	
Athy	Completion A., £150	2,300
	,, B., £2,150	
Baldoyle	Extension, £100; 1869	332
	Completion B., £232	
Ballybrack Parish—Foxrock Temporary Church	Cost, £600; Built, 1907	600
Ballymore-Eustace	Completion, £1,000	1,000
Balbriggan	Extension and Completion A., £8,500; 1894-7	9,470
	Completion B., £970	
Blanchardstown Parish—Porterstown Church	Cost, £5,000; Built, 1891-3	5,000
Blessington Parish—Kilbride Church ..	Cost, £1700; Built, 1876	1,700
Booterstown and Blackrock	Booterstown: Completion B., £490	850
	Blackrock ,, B., £360	
Boystown—Valleymount Church	Extension, £300; 1910	500
	Completion A., £200	
Bray	Completion A., £22,727; 1895	22,727
Castledermot—Castledermot Church ..	Completion B., £873	873
Celbridge—St. Patrick's	Extension, £480; 1912	2,598
	Completion B., £1,818; 1912-5	
St. Brigid's, Straffan	,, B., £300	
Clontarf	Extension, £5,000; 1895	5,520
	Completion A., £520; 1910-11	
Coolock	Completion A., £114; 1916	114
Cullenswood	Cost, £22,068; Built, 1909-14	22,068
Donabate—Donabate Church	Cost, £6,630; Built, 1902-3	8,930
Balheary Church	Completion B., £300	
	Cost, £2,000; Built, 1869-73	

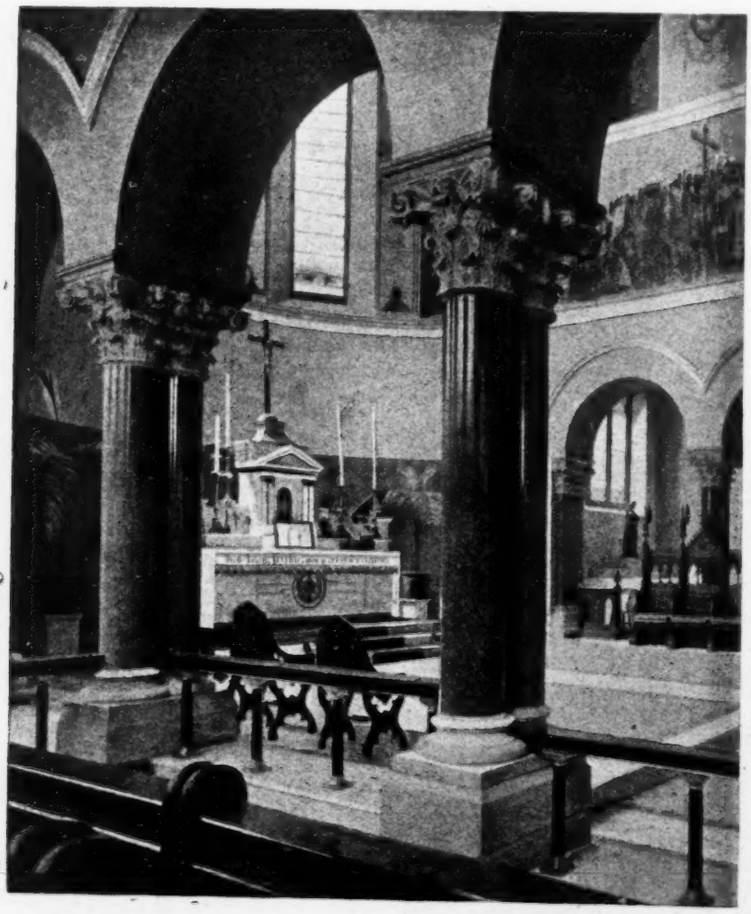


Dominican Chapel, Eccles-street, Dublin.
MR. R. M. BUTLER, Architect.

The Northern Banking Co.'s Premises Entrance.
MESSRS. YOUNG & MACKENZIE, Architects.
(*See "Some Irish Impressions," p. 3.*)

SUBURBAN AND RURAL CHURCHES—*Continued.*

Parish.		£
Donnybrook	Original cost, £8,340; Built, 1863-66	9,840
Dundrum	Completion A., £1,500; 1913	15,500
Dunlavin—Dunlavin Church	Cost, £15,500; Built, 1876-79	3,600
Davidstown Church	Extension, £2,000; 1898	10,000
Enniskerry	Cost of original structure, £1,600; Built, 1876 ..	1,455
Fairview	Cost, £10,000; Built, 1866	6,000
Garristown—Garristown Church	Completion A., £1,455; 1905	489
Glasnevin—Temporary Church	Cost, £6,000; Built, 1903-5	10,000
	Cost, £216; Erected, 1879	
	Extended, 1902—£273	
Glasthule & Dalkey—Glasthule Church ..	Cost, £7,000; Built, 1869	
Dalkey Church ..	Completion B., £1,400	
Glendalough & Roundwood—Roundwood Church	Completed B., £1,600	7,435
Moneystown Temporary Church ..	Cost, £655; Built, 1908-9	
Greystones—Greystones Church	Built, 1903-4—£4,000	10,000
Blacklion Church	Extension and Completion A., 1908-9—£3,000	
	Cost of original structure, £3,000; 1867	
	Extension, £8,686; 1878-1912	
Haddington-road	Completion A., £12,32[illegible]6,052 (A.) 1895-1908 ..	24,738
	,, B., £3,730 (B.) 1878-1912 ..	
Howth	Cost of original structure, £11,200; Opened, 1899 ..	
Sutton Temporary Chapel	Completion A., £2,273	14,023
Kilbride & Barndarrig—Barndarrig Church	Cost, £550	
Kilcullen—Kilcullen Church	Extension and Completion B. £2,500; 1878	2,500
Gormanstown Church	Cost, £7,000; Built, 1869-72	8,300
Kilquade—Newtown, Mount-Kennedy Church	Completion A., £1,300	700
Kilquade Church	Rebuilt, £700	
Kingstown—St. Michael's Church	Completion A., £150; 1867	1,135
Lusk—Lusk Church	,, B., £700; 1906	
Monkstown—St. Patrick's	,, B., £285	
Narraghmore—Ballymount Church ..	Finished, 1902; Cost, £52,000	52,000
Ballytore Church	Extension 1884 £800	800
Naul—Ballyboghill Church	Completion A., 1884	
Rathfarnham—Rathfarnham Church ..	Completion A., £260; 1910-12	360
Rathgar	,, B., £100; 1910	
Rathmines	Cost, £1,593; Built, 1876-8	
Ringsend	Completion B., 1894-5;	2,400
Rush	,, 1906; £85	
Sandyford—Glencullen Church	Completion A., 1868; £570	570
Sandymount	Built, 1875-9; Cost, £9850	9,850
Terenure Church	Completion A., 1883-4; Cost, £2,500	2,500
Wicklow—Rathnew Church	Completion A., £10,864; 1878-85	11,386
Swords—Swords Church	,, B., £522	
	Finished, 1916; Cost, £15,000	15,000
	Extension, 1899-1901; £6,000	6,700
	Completion B., 1907 £700	
	Built, 1907-8; Cost, £2,500	2,500
	Completion A., 1883-4; £348	448
	,, 1912; £100	
	Built, 1904-5; Cost, £20,000	20,000
	Built, 1881-2; Cost, £1,330	1,330
	Completion B., £200	200



Church of the Holy Cross, Ardoyne. Mr. R. M. BUTLER, F.R.I.B.A., Architect.

DIOCESE OF WEXFORD.

The Cathedral of Wexford was built in 1840 from the designs of the elder Pugin. Its cost is difficult to arrive at, as much free labour was given; it is estimated that it would have cost about £25,000, if built within recent years.

Name of Church.	*Date.*	*Cost.*
Lady's Island	1867	£3,000
Kilmore Quay	1870	£1,000
Taghmon	1872	£2,500
Rathangan	1875	£9,000
Ballyduff	1875	£1,000
Monageer	1872	£1,000
Ballyinghter	1876	£2,000
Duncannon	1880	£1,500
Courtown Harbour	1884	£2,000
Newbawn	1889	£3,000
Templendigan	1886	£1,000
New Ross	1898	£28,000
Templetown	1900	£2,000
Marshallstown	1887	£1,500
Screen	1899	£2,000
Crossabeg	1914	£3,000
Rosslare Iron Church ..	1912	£600
Cushenstown	1866	£3,000
Terrerath	1866	£1,000
Tara Hill School Chapel	1892	£900
Oulart	1910	£4,000

*The cost given above must be regarded as approximate, as, with the exception of New Ross, the churches are situated in rural districts, and the farmers cart sand, stone and lime to the sites free of charge as a gift to the Church.

ARCHDIOCESE OF ARMAGH.

(Excluding the Cathedral elsewhere mentioned.)

COUNTY OF LOWTH.

St. Peter's Church, Drogheda.—A very beautiful and imposing Gothic church, in dressed limestone, perfectly finished exteriorly and interiorly.

St. Feekin's Parish Church, Termonfeckin.—A very handsome Gothic church, in hammered limestone, perfectly finished exteriorly and interiorly.

Parish Church of Mary Immaculate, Collon.—A handsome and imposing Gothic church, in hammered limestone, perfectly finished except spire.

St. James' Parish Church, Togher.—A handsome Gothic church, in hammered limestone, perfectly finished.

Parish Church, Monasterboice.—A very beautiful Gothic church, in hammered limestone, perfectly finished exteriorly and interiorly.

Parish Church of the Holy Angels, Louth.—A very beautiful and imposing Gothic church, in dressed limestone, perfectly finished exteriorly and interiorly.

The Redemptorist Church of St. Joseph, Dundalk.—A very beautiful and imposing Romanesque church, in dressed granite, elaborately finished exteriorly and interiorly.

St. Brigid's Church, Foghart.—A very beautiful and imposing Romanesque church, in dressed granite, perfectly finished exteriorly and interiorly.

A very pretty Chapel of Ease, recently built in Darver Parish.

COUNTY OF ARMAGH.

St. Patrick's Church, Cullyhanna, Parish of Lower Creggan.—A very handsome Gothic church, in dressed limestone, finished exteriorly and interiorly except spire.

Church of the Sacred Heart, Killeavey, near Newry.—This is a very beautiful and imposing Romanesque church, in dressed granite; it is elaborately finished exteriorly, and interiorly artistically furnished with choice marbles.

Parish Church of Ballymacnab, near Armagh.—This is a handsome Gothic church, recently built in dressed limestone. Another pretty auxiliary church has been built in the same parish recently, but not so elaborate as the preceding.

St. Patrick's Cathedral, Armagh.—Commenced in 1840, completed and consecrated in 1904.

Parish Church of Loughgall.—This is a very pretty little Gothic church, just finished, in dressed limestone.

COUNTY OF TYRONE.

St. Patrick's Church, Dungannon.—This is a very large, handsome and imposing Gothic church, with graceful tower and spire, built in dressed Dungannon freestone.

Parish Church of Aughnacloy.—This is a very beautiful and artistic Romanesque church, recently built, in dressed limestone; the exterior is finished, but the interior not yet complete.

Parish Church of Pomeroy.—This is a very handsome Romanesque church, just finished, in hammered freestone from the neighbouring Carland quarries.

PART OF COUNTY DERRY, IN THE ARCH-DIOCESE OF ARMAGH.

Church of the Sacred Heart, Magherafelt.—This is a very beautiful and imposing Gothic church, with graceful tower and spire, elaborately finished exteriorly and interiorly.

Parish Church, Lissan, near Cookstown.—This is a very beautiful Romanesque church, built in dressed limestone, and elaborately finished exteriorly and interiorly. It was built and furnished by a gentleman who died recently in Philadelphia, as a gift to his native parish.

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> **"The asbestos material Dr. Shipley had spoken of was a most pleasing covering for such buildings (hospitals, etc.). In one of his (the speaker's) hospitals he had asbestos sheets on the inside, and it was quite delightful. They did not paint them or do anything to them."—*The Builder*, Nov. 26, 1915.**

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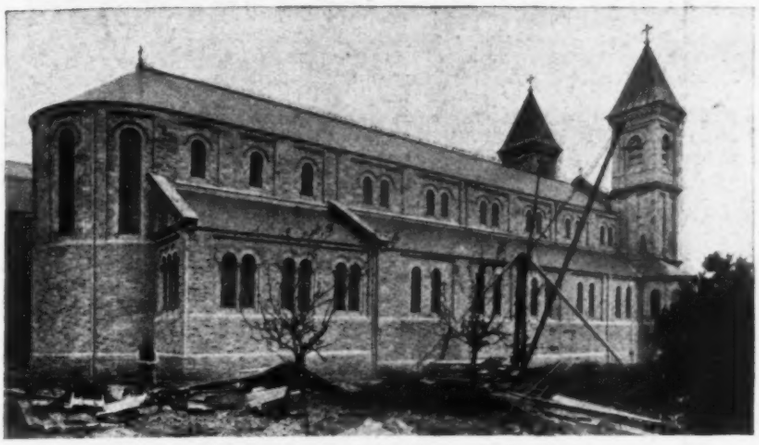
Telegrams: "Asbestos" or "Belfry."



Church of the Holy Cross, Ardoyne.
Mr. R. M. BUTLER, F.R.I.B.A., Architect.

OBITUARY.

Mr. R. Henry.

The death, on December 18, at Albert House, Hastings, is announced of Mr. Robert Henry, of Dunholm, Sutton, Surrey, aged 62 years. Mr. Henry was elected an Associate of the Royal Institute of British Architects in 1889. He was formerly architect to H.M.'s Office of Works.

Second-Lieutenant N. C. Lucas, M.A., B.Sc.

Second-Lieutenant Norman Carey Lucas, Royal Irish Rifles, who died of wounds on November 2, aged 23 years, was a son of Mr. William Lucas, F.R.G.S., architect on the Federal Capital Staff, Melbourne. Proceeding to South Africa, he obtained a Natal Government Scholarship, and then entered Edinburgh University, where he was medallist in chemistry and won a Hope Prize and a Carnegie Research Scholarship.

DIOCESE OF KILMORE.

There is no cathedral in Cavan. The pro-cathedral was erected as a parish church in 1821 and added to in the sixties.

Churches have been built at—

Killygarry.	Kinawley.
Butlersbridge.	Teemore.
Milltown.	Dromreelly Lower.
Killeshandra.	Manorhamilton.
Ballinagh.	Dromkeerin.
Crosserlough.	Dromahaire
Magheragh.	Dromalee.
Killann.	Kiltyclogher.
Mudabawn.	Mullies.
Kilnavart.	Wheathill.

Of most of these the late Mr. William Hague was the architect.

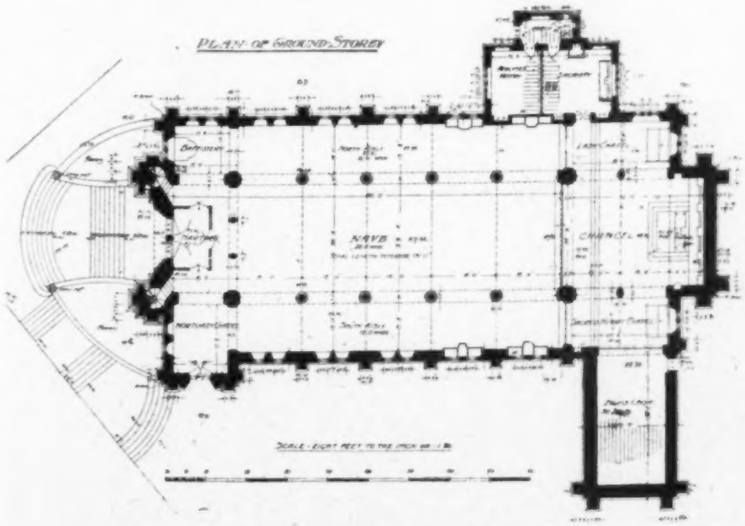
DIOCESE OF LOUGHREA.

The cathedral was built 1896–1903, at an approximate cost of £11,000, excluding the cost of tower and spire. The organ cost £1,000 and the high altar £1,100. The cathedral contains good examples of Irish workmanship and craftsmanship. The churches of the diocese of which particulars are obtainable at the time of writing are plain, with the exception of Ballinasloe, which was designed by Pugin and has a fine ceiling and a graceful tower and spire.

DIOCESE OF ARDAGH.

	COST
St. Mel's Cathedral, Longford, was built in 1840, completed in 1856, portico built and the church consecrated 1893 ..	£75,000
Church of St. Mary, Athlone, built 1857–1861	£30,000
Diocesan College and Chapel, built in 1865..	£45,000
St. Joseph's Convent, Longford, completed 1875..	£50,000
St. Mary, Granard, completed 1863 ..	£25,000
St. Mary, Carrick-on-Shannon, completed 1895..	£20,000
St. Matthew, Ballymahon, completed 1915	£14,000
Church at Ferbane	£10,000
Church at Edgeworthstown	£10,000
Church at Ballinahowen	£10,000
Church at Mullahoran	£4,000
Church at Loughduff	£3,000

Church of St. Mary, Cork



Castleberehaven Church.

Castleberehaven Church.
Mr. R. M. BUTLER, F.R.I.B.A., Architect.

RE-BUILDING OF DUBLIN.

IT was at noon on a glorious spring day—Easter Monday, 24th April last—that the rebellion in Dublin broke out; for the greater part of the week fighting continued. The leaders surrendered on the Friday, and by Saturday most of their adherents had followed their example. On the ensuing Monday, although sniping and desultory fighting still continued in outlying parts, the citizens could view the city.

What a sight met their eyes! Almost the whole of Lower Sackville-street and a number of important adjoining streets lay in ruins, destroyed by shell and fire, and the General Post Office, built in 1815 from the designs of Francis Johnston, R.H.A., had been completely gutted by fire.

The street, which in its lay-out dates from the middle of the eighteenth century, was one of the most imposing in Europe, though, with the exception of the General Post Office, it could boast of no great architectural features; still the soft, mellow tone of the old walls, despite modern shop-fronts, with the general charm of the surroundings, blended into a perfect picture of an important eighteenth century street.

When the first shock was over, the thought of every citizen was, how might the street be worthily rebuilt, for here was one of the most wonderful and unique opportunities for the exercise of art that ever came.

It was pointed out that Dublin owes most of the fine thoroughfares for which it is remarkable to the enlightened town-planning policy of an eighteenth century body known as "The Wide Streets Commissioners," and that inevitably problems of artistic importance would arise. It was therefore proposed that a like body might be created, clothed with ample statutory powers, and working in harmony with a committee of taste, upon which artistic and other interests would be represented. It was clearly shown that neither the Corporation nor the Local Government Board were suitable tribunals to deal with matters of artistic moment and for which they possessed no machinery.

Unhappily, matters drifted. Government delayed making known its intentions as to compensation and State aid. Public enthusiasm for the aesthetic aspect waxed cold, and the property owners grew restive under their treatment. Eventually, Mr. Asquith announced that the State would make an *ex gratia* grant based on insurable values, in respect of all property destroyed in the suppression of the rebellion. A committee was appointed to settle claims. Although this committee sat soon after the rebellion, and took all evidence with commendable despatch, the result of its deliberations has never been made public, and the property owners still do not know the amount of the compensation they are to be paid! They are, therefore, in a position of not yet knowing what sums they will have available for building.

Meantime, the Lord Mayor had taken a warm and enlightened interest in the effort to have the street worthily rebuilt, and promoted a Bill giving the Corporation control over features of design, in addition to the ordinary powers exercised under the Municipal Bye-Laws and the Public Health Act. It simply conferred general powers to supervise design, acquire property for the purpose of widening, &c. The Bill excited the active hostility of the "Property Owners' Association," which had been formed to safeguard the interests of those whose property had been destroyed. They contended, that as the amount of the *ex gratia* grant, being based only upon the insured value of the old premises, would be quite insufficient for rebuilding in "the grand manner," it would be manifestly unfair to expect them to defray the difference, for the purpose of beautifying Dublin. There was much in the contention, but it was pointed out, on the other hand, that this street was really a national monument, a heritage from a more artistic age; that it was unreasonable for the property owners to ask to be allowed to work their individual and unfettered wills on the design of such a street; furthermore, that they would reap the advantages of better designed premises; and the Corporation undertook to seek from Government money to lend at reasonable interest, to bridge the difference between the *ex gratia* grant and the actual cost of the new building, also to guarantee certain preferential rating. The property owners appeared to be rather suspicious of the Corporation, and a deadlock ensued, the Bill being opposed in Parliament on their behalf.

One of the aims of those who advocated a great scheme for Sackville-street was to secure fine sites for a few much-needed public buildings in this stately thoroughfare, as it was well known that, except for a certain number of very old-established firms, Sackville-street never was, and, owing to its great width, never could become, a first-class shopping centre. Many of the traders were, comparatively speaking, "birds of passage," who would be the better off for equitable compensation and migration to more suitable shopping streets, two or three of which will shortly be available, directly off the best and most fashionable centre in Dublin—Grafton-street, the Bond-street of Dublin. In point of fact, it is well known that several traders will not re-open in Sackville-street, and others began to sell their sites the very next day after the conflagration ceased.

Under the influence of these disputes and bickerings, public interest waned; the Government did not, of course, seek to force State aid upon anyone. The Corporation, to prevent the loss of the Bill, again opened up negotiations with the Property Owners' Association. They appointed a committee to advise them; upon it were nominated Mr. Raymond Unwin, town planning expert of the English Local Government Board; the President of the Royal Institute of the Architects of Ireland; and two other local architects, with certain officials of the Corporation. Their labours extended over a considerable period, and were summed up in a voluminous report, which discusses the academic pros and cons of the question, and certain matters of town planning. It does not, however, in any way help in obtaining a fine scheme of rebuilding, having simply followed the line of least resistance; but the committee of advisers assisted the Corporation to secure an agreement with the Property Owners' Association, as a result of which the Bill has now become law as an agreed measure. The substance of the agreement is that the Corporation have secured certain limited powers over the reconstruction, but whether these were worth all the trouble involved is another matter. The Corporation retain, of course, the ordinary powers under the municipal by-laws, and acquire, in addition, a limited control over the design of the external façades, in the sense that the City Architect may object to any design, subject to a right of appeal, and he may fix heights, &c. There is no special control over internal design. The Corporation also acquire authority to purchase sites for the special purpose of street widening—a clause of very doubtful necessity. Two adjoining streets destroyed are rather narrow, but it undoubtedly added to their value as shopping centres, and their narrowness was never seriously felt until the Corporation, some years ago, foolishly allowed the tram company to run a line of mammoth electric cars down Earl-street, congesting the traffic, and destroying amenity.

In return for the concessions by the property owners, the Corporation agree to lend money to bridge the difference between the *ex gratia* grant and the cost of building, and to confer preferential rating for a term of years.

It is clear that the dream of a great architectural scheme cannot be evolved out of the mere power of veto by a civic official—a right which it would indeed be difficult to assert, unless a design were so bad as to be manifestly unfit to be passed. Limits of height might certainly be fixed, and the one thing veto may save the city from is an orgy of harsh and discordant colour. The City Architect might prescribe some fine native material, such as Irish limestone or Dublin granite. It is a moot point whether it would not be much better to "scrap" all the other powers and authority, and leave it at that. In this case, as in many others, it has proved impossible to emphasise the importance of the right solution of the subject to the satisfaction of the public, who, though they freely indulge in criticism, are very reluctant to give powers the use of which alone will make better things possible.

Presbyterian Church, Belfast.
MESSRS. YOUNG & MACKENZIE, Architects.

Bank House, Warrenpoint. MR. CLOSE, Architect.

CORRESPONDENCE.

Housing after the War.

SIR,—In your issue of December 15, Mr. Edward M. Gibbs suggests proposals for some form of cottage construction which will make possible the erection of small houses which will be fireproof, warm, sanitary.

We believe we can demonstrate to the satisfaction of all concerned that a timber frame covered inside and out with a sheet of fireproof sheeting, plastered inside with gypsum plaster and outside with Portland cement (waterproofed) pebble dash work, or floated surface, slate roof, &c., will meet all these requirements, and we believe this construction will have a life of eighty years, as the timber in this form of construction would be protected against dampness absolutely. This form of construction is cheap, and effects a great saving in labour. We guarantee that a complete house can be erected ready for interior wood trim in six days' time, exclusive of chimney breasts, fireplaces, plumbing, &c.

If some public body will erect the timber frame for a bungalow type cottage, we will be glad to furnish the fireproof sheathing we refer to.

CULVER & FERGUSON.

BOOKS.

Marbles. By J. WATSON. Cambridge University Press. 5s. net.

"SUPPORT Home Industry" is the maxim everyone hopes to see adopted after the war to a far greater extent than was the case, and there should certainly be no reason against it in the use of British marbles—if only the producer and user will pull together. There are over a hundred varieties of marbles in the British Isles alone, apart from extensive quarries all over the Empire, yet how many of us are familiar with more than a very small number of their specimens? The new Australian Government offices are, we believe, to be decorated internally with this material, brought from Australia, so that we shall have an exhibition of that country's examples close at hand. The use of marble in this country has increased somewhat in recent years, but hardly as much as the beauty and quality of the material justify. We confess that we are not in favour of its adoption for external work as, quite apart from the rather doubtful question of durability, the appearance suffers considerably in our climate. For internal work, however, it is, or would be, in many cases the material *par excellence*, so long as it is judiciously handled. A useful textbook on "British and Foreign Marbles and other Ornamental Stones," by Mr. John Watson, Hon. M.A. (Cantab.), has recently been published. It is a descriptive catalogue of the specimens in the Sedgwick Museum at Cambridge, which is open to the public. Over 800 specimens are dealt with, but, as the author points out, the student of Classical architecture may find the collection lacking in specimens of many marbles which were used in ancient times and are famous in classical history. The explanation of this apparent deficiency is that the quarries from which many of the ancient marbles were obtained have long since been exhausted, or their localities are now unknown. As the collection is intended to represent only the decorative materials which are of economic value at the present day, marbles which cannot now be obtained in appreciable quantities are excluded. In an instructive introduction to his book, Mr. Watson discusses the causes which produce the variety of colours displayed in marble and also its durability. Dealing with the latter, he draws attention to the fact that the formation of most marbles is due to metamorphism, which alters the compact rock into a crystalline stone; and the earth's movements frequently shatter the rock, producing fissures which may become filled with ore-bearing solutions and foreign matter. These physical and chemical changes render the stone more liable to be attacked by the atmosphere. The metalliferous minerals present in the veins of coloured marbles are subject to oxidation, and consequent decomposition. It is sometimes sought to arrest this decay by raking out the bad veins and filling the cracks with shellac or other foreign material, dexterously coloured to imitate the natural stone.

MEETINGS.

FRIDAY, JANUARY 5.

Town Planning Institute.—Professor P. Abercrombie, M.A., A.R.I.B.A., and Mr. S. A. Kelly, F.S.I., on "A New Town Plan for the City of Dublin." 6 p.m.

MONDAY, JANUARY 8.

Incorporated Clerks of Works Association (at Carpenters' Hall, London Wall).—6.45 p.m.

Royal Institute of British Architects.—General meeting: Election of members.

TUESDAY, JANUARY 9.

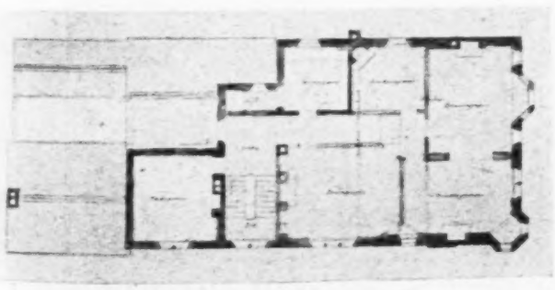
Institution of Civil Engineers.—"Recent Progress in Dredging Machinery," by Mr. William Brown, M.Inst.C.E. 5.30 p.m.

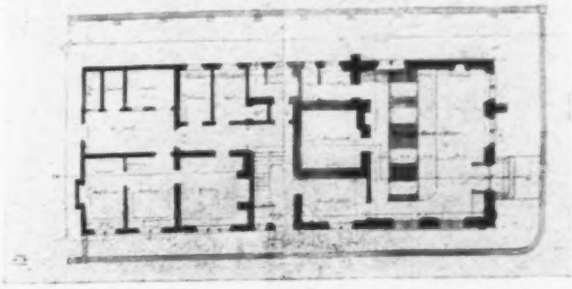
Incorporated Institute of British Decorators.—Mr. W. S. Barrett, F.I.B.D., on "Letters and Lettering." 8 p.m.

THURSDAY, JANUARY 11.

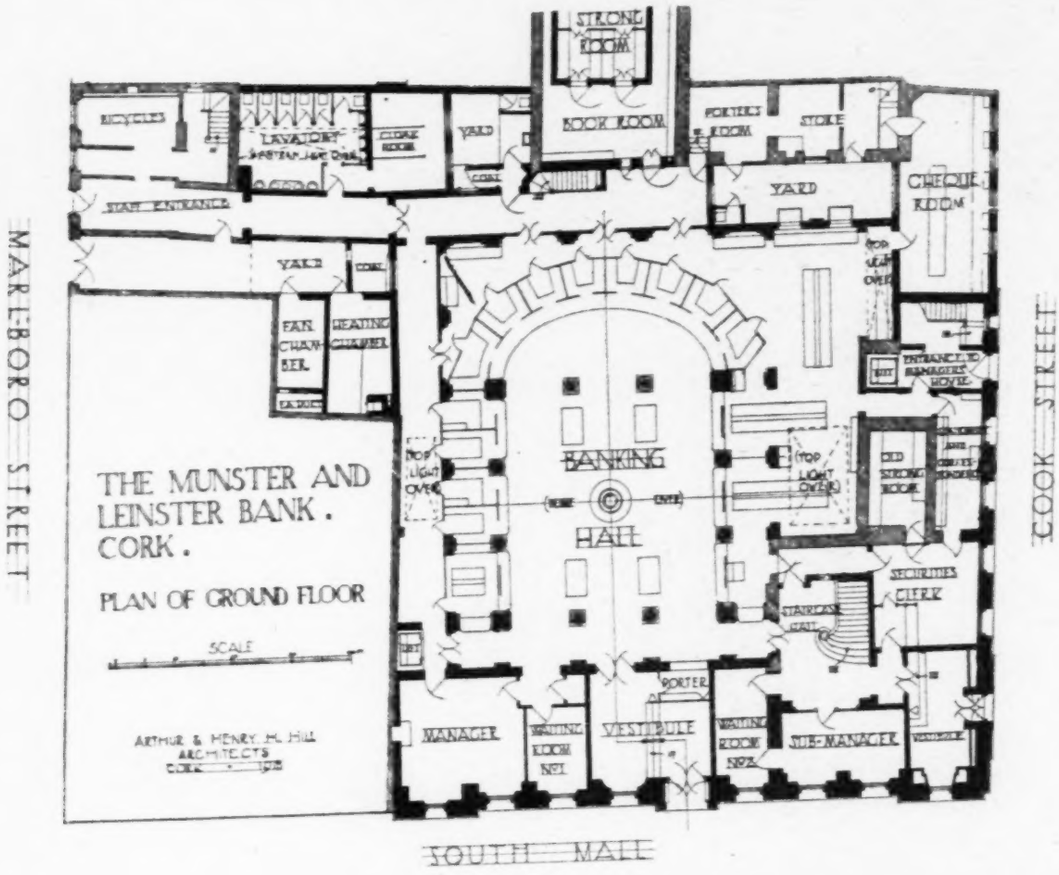
Institution of Electrical Engineers.—Messrs. F. Gill and W. W. Cook on "Principles involved in Computing the Depreciation of Plants." 8 p.m.

University Extension Lecture (at the L.C.C. Central School of Arts and Crafts, Southampton-row).—Mr. Banister Fletcher, F.R.I.B.A., will give a "Résumé of Ancient and Mediæval Architecture." 6 p.m.

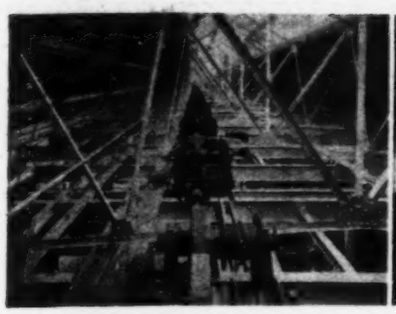




Bank House, Warrenpoint. MR. CLOSE, Architect.



Munster and Leinster Bank, Cork. MESSRS. ARTHUR AND HENRY H. HILL, ARCHITECTS. (See p. 11.)



GENERAL ARRANGEMENT OF POWER HOISTS.

PASSAGE BETWEEN CATTLE LAIRAGE AND SLAUGHTER HALL.

PASSAGE BETWEEN SLAUGHTER AND HANGING HALLS.

Belfast Abattoir. MR. HENRY CUTLER, M.Inst.C.E. CITY SURVEYOR, ARCHITECT. (See p. 11.)

GENERAL NEWS.

Additions to Fitzwilliam Museum.

A large number of sketch-books, note-books, and lectures by John Flaxman, R.A., have been presented to the Fitzwilliam Museum, Cambridge. The most interesting is a book of portraits of his friends and contemporaries, including Blake, Fuseli, and other artists of the period.

South African Branch of the Society of Architects

In the absence of the President, Mr. S. C. Dowsett, on active service in East Africa, the Acting President, Mr. D. Ivor Lewis, presented the tenth annual report of the branch at a meeting held in Johannesburg on October 10, 1916. The total membership is 55, a decrease of four. Some 30 per cent. of the members are on active service, including the retiring President. The financial position is sound, there being a credit balance in the bank of £130. Owing to the war the architectural classes at the S.A. School of Mining and Technology were poorly attended and the branch prizes were not allocated in full, but a book prize of the value of £4 10s. was awarded to Mr. W. B. T. Newham, who attained a First Class Pass with distinction and first place in the examination. The Union of South Africa Registration Bill is not being pressed by the branch at present, but at a more opportune moment the branch will resume its active propaganda in conjunction with the other architectural bodies. The following officers were elected for 1917 :—President, D. M. Burton ; Vice-Presidents, W. J. McWilliams, H. G. Veale ; Honorary Secretary, M. J. Harris ; Honorary Treasurer, D. M. Sinclair ; Council, S. C. Dowsett, E. H, Waugh. D. Ivor Lewis, J. F. Beardwood ; Auditor, J. S. Donaldson. The meeting approved, subject to confirmation by the Home Council, which has since been obtained, the following Resolutions agreed to by the branch representatives at a joint conference of architectural bodies, held at Johannesburg on June 28, 1916.

"That this meeting expresses its confidence in the Registration Committee recently appointed by the Association of Transvaal Architects, and considers that the Registration Committtee appointed by the various centres constitutes the proper body to act on behalf of the united profession in South Africa."

"That this meeting affirms its sympathy with the proposal to preserve the identity of the existing South African Architectural Societies for local purposes, but to affiliate the said Societies with a new organisation, namely, the South African Institute of Architects, to deal with broader questions."

Single-Apartment Dwellings, Glasgow.

The annual statement by Mr. Alexander Walker, City Assessor, Glasgow, on the number of occupied and unoccupied premises within Glasgow city at Whitsunday last has been issued. It shows that there was a total of 226,592 occupied houses and 4,205 empty houses. The total number of subjects on the Valuation Roll, including houses, shops and other premises, was 281,416, of which 271,203 were occupied and 10,213 empty. Details are given in the return of the number of houses in each ward which consist of a single apartment, or of two, three, four, or five rooms and over. Dalmarnock Ward, with 4,487, is shown to contain the largest number of occupied single-apartment dwellings, the number at the corresponding date last year being 4,265 single-apartment dwellings. Mile-end Ward comes next with 3,367 ; Hutchesontown, third, with 2,848 ; and Springburn, fourth, with 2,802 single apartment houses. The figures for last year were Mile-end, 3,333 ; Hutchesontown, 2,792 ; and Springburn, 2,720.

Award of the D.S.O.

Temporary Major J. Wightman Douglas, R.E., who has been awarded the D.S.O. for gallantry and devotion to duty in the field, is the second member of the Society of Architects serving in that branch of the Army to receive this distinction during the present war. Major J. Wightman Douglas supervised the wiring of the whole line under heavy fire, and set a splendid example of courage and determination throughout. Major J. Wightman Douglas is an architect practising in Newcastle-on-Tyne.

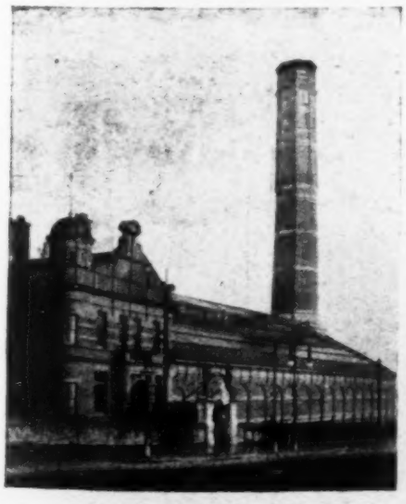
Aberdeen and Town Planning.

Professor Patrick Geddes, of the Chair of Botany in University College, Dundee, is to be invited to Aberdeen to express his views in regard to the future development of the city ; and in order that he may have material on which to base his suggestions, a movement has been initiated to form a collection of data and exhibits, to be laid out probably in the Aberdeen Art Gallery.

With the view of promoting this scheme and giving the members of the Northern Arts Club some idea of the aims and methods of the lecturer, Mr. J. A. H. Hector, art teacher, recently lectured on "The Work of Patrick Geddes," in the clubroom.

German War Medals

Sir Arthur Evans exhibited at the meeting of the Royal Numismatic Society on Thursday last week specimens of the medals, now numbering more than 500, which have been struck in Germany during the war. A large cast-iron medal commemorates the air raid of August 17–18, 1915, on the Eastern Counties, and depicts two Zeppelins over the Tower Bridge, with London in flames in the background. On the other side is the head of Count Zeppelin, to whom similar honour is paid on some of the other medals. Von Hindenburg appears to be the most popular subject with the designers, but von Tirpitz is not neglected.

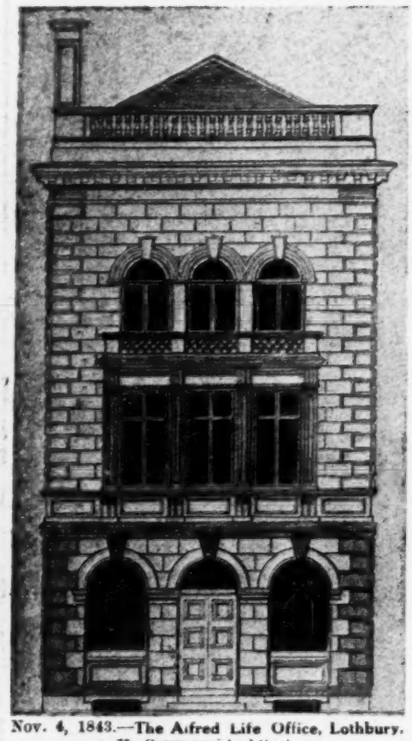


GENERATING STATION.

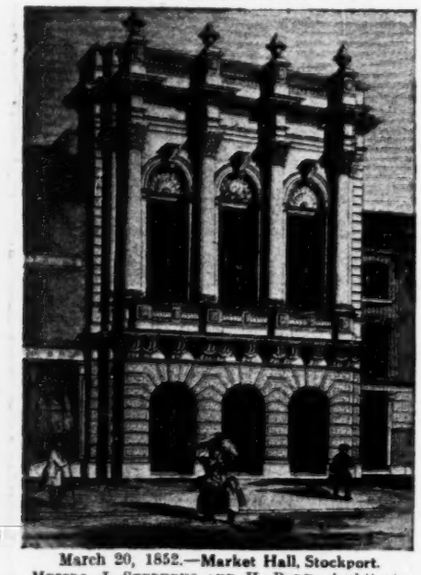
FURNITURE WAREHOUSE.

LINEN WAREHOUSE.

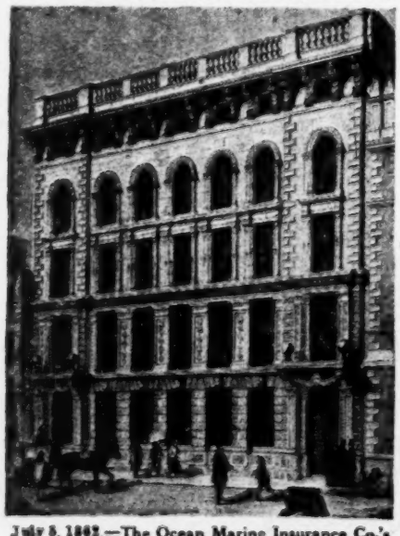
Some Belfast Buildings. MESSRS. TULLOCH & FITZSIMONS, FF.R.I.B.A., ARCHITECTS. (See p. 12.)



Nov. 4, 1843.—The Alfred Life Office, Lothbury.
H. CLUTTON, Architect.



March 20, 1852.—Market Hall, Stockport.
MESSRS. J. STEPHENS AND H. PARK, Architects.



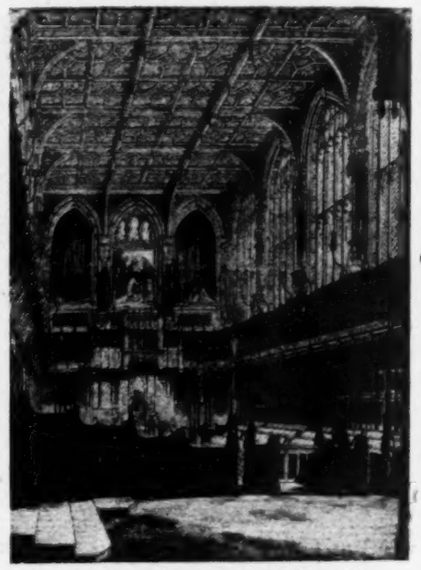
July 5, 1862.—The Ocean Marine Insurance Co.'s Office, Old Broad-street.

THE "BUILDER" IN THE 19TH CENTURY.

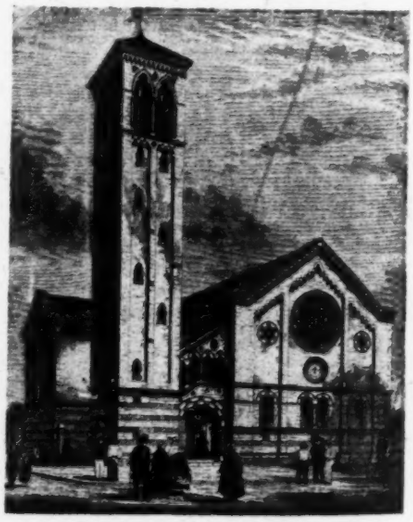
THE first number of the *Builder* was published on December 31, 1842, in the reign of William IV, twenty-seven years after the battle of Waterloo had brought peace to Europe after the long Napoleonic struggles. In our "Address," we described a conversation with a leading bookseller and printer to whom we expressed surprise at the "costly, not to say exorbitant, price of architectural books," which, he informed us, was due to the small number sold. Our object was defined as an attempt to produce, at a price within the means of all of those interested in building, a publication which dealt with matters of interest to architects, contractors, and artisans. Though we cannot any longer claim that books on technical matters are beyond the means of any considerable section of people, and all have the opportunity of consulting them at free libraries, there has been an increasing demand for publications which give current information relating to building and the allied crafts of design, while the enormous improvements introduced into methods of reproduction render the adequate illustration of such subjects possible. The first illustrations were sparingly introduced, and were made from wood blocks. The introduction of zinc blocks was a subsequent step, followed, after a considerable interval, by photo-lithography, with photos, and the half-tone and other processes used in more recent years. It was some years before inset illustrations were introduced, and a further advance was the use of a large number of additional blocks in the text. To illustrate various phases of past architectural expression we give a number of small reproductions from the *Builder*, selected at intervals of five years, and forming an epitome of the changing phases of art during the first sixty years of the existence of the *Builder*. The first illustration shows a pleasing design for an insurance office, conceived in a quiet classic manner (the Alfred Life Office, Lothbury). The whole of the front, excepting the quoins, which were of stone, was carried out in "metallic cement."

On April 17, 1847, we illustrated an interior view of the House of Lords, which was included in the first section of Sir Charles Barry's great building, work on the foundations of which was started in 1839. A true appreciation of Barry's genius can only be arrived at after consideration of the quality of the work of his contemporaries, and when it is remembered that he was compelled, against his inclinations, to adopt a Gothic manner in the Houses of Parliament, his genius can be appreciated at its real value, although he had the invaluable assistance of Pugin's knowledge and enthusiasm. The Market Hall at Stockport, which was illustrated in our pages on March 20, 1852, is an example of the customary heavy "Italian" of the date, and, on July 18, 1857, we illustrated the Sinclair Seaman's Church at Belfast, still regarded as being among the best buildings of the city. The names of both Lanyon and Lynn are conspicuous among those of the architects of modern times in Ireland, and both of them are held in affectionate remembrance there. On July 5, 1862, we gave an illustration of the new offices for the Ocean Marine Insurance Company in Old Broad-street. In a description of them we state that the Ocean Marine Company are anxious to avoid publicity, and would prefer that business should not be offered to them! The architect, like the Company for whom he worked, was anxious to avoid notice, since no name is mentioned in the description. The design is excellent in its quiet reticence and simplicity, and is to-day among the best and most typical buildings in Broad-street. The Inner Court of the India Office, by Mr. M. Digby Wyatt (October 26, 1867), recalls the name of one of the foremost of the scholarly designers of the time, and affords evidence of the result of a close study of Italian architecture.

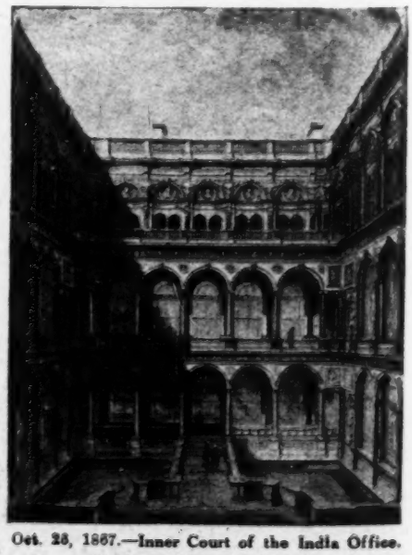
Though the tide of the Gothic Revival was running very strongly at this period, it revealed itself mostly in church building, and, side by side with it, we find business premises and other secular buildings designed in a classical type, among which may be mentioned Drapers' Hall, which was reconstructed about 1870.



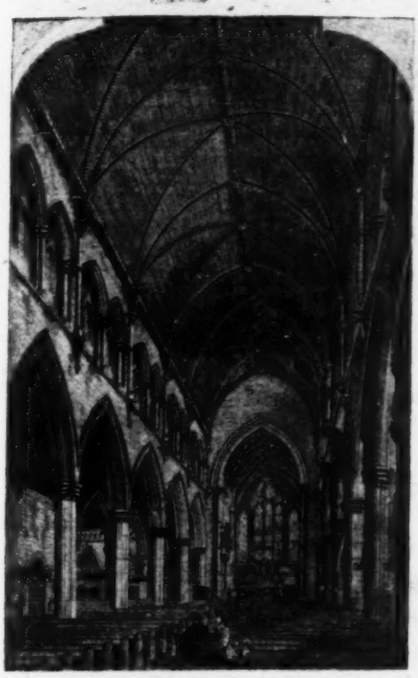
April 17, 1847.—Interior of the New House of Lords.
SIR CHARLES BARRY, R.A., Architect.



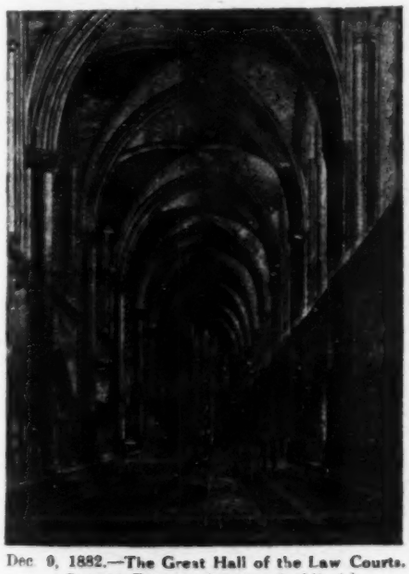
July 18, 1857.—The Sinclair Seaman's Church, Belfast.
[MESSRS. LANYON AND LYNN, Architects.



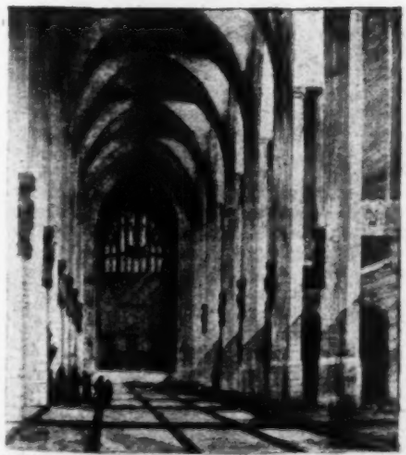
Oct. 26, 1867.—Inner Court of the India Office.
M. DIGBY WYATT, Architect.



Nov. 23, 1872.—**Church of St. Mary Abbott, Kensington.** GILBERT SCOTT, Architect.



Dec. 9, 1882.—**The Great Hall of the Law Courts.** GEORGE EDWARD STREET, Architect.



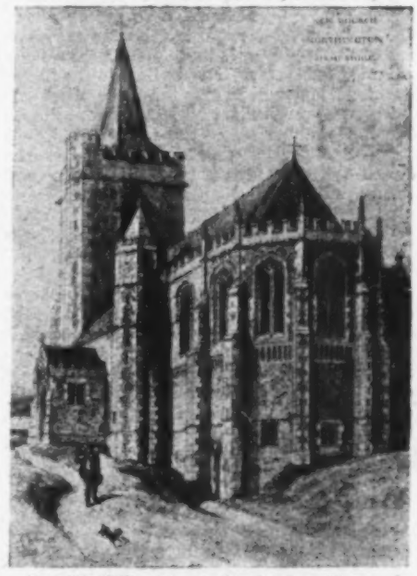
Oct. 15, 1892.—**Church of Miles Platting, Manchester.** MR. LEONARD STOKES, Architect.

But concentration upon the newly explored field of medieval art and the growing practice of sketching abroad indulged in by the younger architects, led to greater carelessness and lack of attention to the scholarly niceties of the Renaissance, so that the period between 1870 and 1885 may be looked upon as the nadir of architecture founded on the canons of the Renaissance. Despite the careful and conscientious work of a few who were unwilling to worship at the shrine of newly-discovered medievalism, quiet reticent design was abandoned in favour of the cult of picturesqueness, and we have had, in the last twenty years, to learn anew many of the lessons which the architects of the early part of the century knew by rote.

Yet the Gothic Revival did much for our art in directing attention to the study of materials, texture, and construction, while the genius of Norman Shaw initiated an enormous development of the art of domestic architecture which contributed to make the best modern English houses models which are largely followed both on the Continent and in America. Apart from this, several generations of architectural effort have resulted in the building up of a school of church designers whose best work can well compare with any of the past, while the lessons learnt should add new vitality to our architecture as a whole.

On November 23, 1872, we illustrated St. Mary Abbott's Church, by G. Gilbert Scott, which will always hold a high place among the works of the Revival. St. Augustine's, Pendlebury, Manchester (June 23, 1877), is a fine example of the delicacy and refinement which always characterized the works of Messrs. Bodley and Garner, who have left a rich legacy to contemporary art. On December 9, 1882, we gave a view of the Great Hall of the Law Courts, the finest part of Street's great work, which, though it met with plentiful abuse at the hands of the ignorant, must always be regarded as one of the greatest of our modern buildings. The so-called mistakes of Street were largely the result of the parsimony of the authorities who reduced the size of the site allotted for the Courts, and so hampered the designer's task, and though many faults of detail can be pointed out, they are those of a genius working in a difficult period. The anecdotes which are told of Street, Burgess, and other pioneers of the new movement will pass into architectural history, especially those connected with Burgess, whose antiquarian knowledge and enthusiasm were enormous, and who could tell the date of a building to within ten or twenty years, from an examination of its masonry. The church at Northington, Hampshire, is a characteristic example of the work of Sir Thomas Graham Jackson (September 10, 1887), to whom Oxford owes much, and Sir Thomas will always be remembered as an exponent of architectural scholarship. We illustrated Mr. Leonard Stokes's fine church at Miles Platting, Manchester, on October 15, 1892. We have always regarded it as among the most dignified and impressive of modern church interiors, and the interior of the McEwan Hall, Edinburgh (December 11, 1897), completes our series, with an illustration of one of Dr. Rowand Anderson's best-known works. Exigencies of space, form, and size have limited our choice of subjects for illustration, and we have included none of the great buildings which have formed the subjects of well-known competitions, with the exception of the Houses of Parliament and the Law Courts, but enough has been shown to prove that, during our first century of existence, we have recorded the trend of modern development and design. In the future, our volumes will have the value of records, while we hope, in the present, to make them of use to all connected with building and the allied arts. Methods of illustration have been improved and altered within the last seventy years, and the process still continues. Prophecy is dangerous, but it may be that, at the end of the twentieth century, all our illustrations will be in colour, and the size of our issues will be materially increased, in order effectively to describe and illustrate the works of a great architectural era. With this hope we terminate our brief review.

June 23, 1877.—**St. Augustine, Pendlebury, Manchester.** MESSRS. BODLEY AND GARNER, Architects.



Sep. 10, 1887.—**Church, Northington, Hants.** SIR THOMAS GRAHAM JACKSON, R.A., Architect.

Dec. 11, 1897.—**McEwan Hall, Edinburgh.** DR. ROWAND ANDERSON, Architect.

THE BUILDING TRADE.

ECLIPSE OR EMPIRE.

UNDER the above title, a small volume has been published at a popular price, which ought to be widely read by the people of this country.

The book is addressed to the man-in-the-street and is intended to stimulate public opinion, to give a lead to its leaders, to force measures, to instigate movements, to the end that the industrial supremacy of Great Britain, which has been threatened and in part usurped by alien Powers, may be regained and put upon a more secure basis.

The force of the book lies in its facts and figures; it does not pretend to be exhaustive of its subject; it seeks to stimulate inquiry, while it concentrates public thought. The facts and figures are presented in a striking and effective way, which ought to command attention in every industry, not excepting that of building and its allied trades.

For instance, comparison of the industrial production per wage-earner per year in the United States and in the United Kingdom, as revealed by censuses of production taken in the years 1907 and 1909, shows that in most cases production per head is from two to three times as great in the United States as in the United Kingdom. The comparative figures for twenty-six trades of various kinds are given, and they are truly startling. The prices given are not retail but wholesale prices. The book points out that while retail prices in the States are much higher than they are here, wholesale prices are very similar and in some cases lower. The high retail prices are due to local conditions peculiar to the United States. Some allowance has to be made for differences in quality and finish, which are not identical in the two countries, but when every allowance is made it is obvious that American production per worker per year is far superior to British.

The census figures indicate the reason for this in a remarkable manner, as will be shown shortly, but it may be first noticed that in the cotton industry, the printing and publishing industry, the railway carriage and wagon industries, etc., the British are comparatively efficient, the production per worker being only about 40 to 50 per cent. larger in the United States.

In mining efficiency, however, the United States is far ahead of the United Kingdom, as is shown by a table comparing the output in tons per annum per worker in the two countries, by which it appears that coal production here decreased from 312 tons in 1886–90 to 260 tons in 1911 and to 244 tons in 1912, the year of the great strike, per worker.

In the United States, on the other hand, coal production increased from 400 tons per worker per year in 1886–90 to 613 tons in 1911 and to 660 tons in 1912.

Making due allowance for the greater average depths of British mines, the results are very striking, especially when we consider that while American output has steadily and largely increased, British output has steadily and largely fallen off. And now for the reason: the book states that, while there are various causes, the principal cause is revealed by the tables relating to the said trades, which show how much horse-power is available in each of them per 1,000 workers, alongside the value of production per wage-earner per year. These tables show the important coincidence that almost invariably America's greater superiority in production per wage-earner per year, is accompanied by a similarly extraordinary superiority in horse-power employed per 1,000 workers. For example, in boots and shoes American production is three times as great as is British production, and American horse-power per 1,000 workers is also three times as great as is British horse-power per 1,000 workers.

And a glance at the tabulated results for the twenty-six trades shows that the horse-power employed is on an average about three times as great in America as in this country.

It is our present war experience confirmed, it is machinery well used rather than mere man-power which is required to win success. It is true the man behind the machine or gun is of the highest importance, but other things being equal, the side having the best and most complete mechanical equipment and able and willing to use it, will come out top in the result.

It is unfortunate that no figures are given for the building trade as such, but it is common knowledge that machinery and mechanical appliances are not preponderatingly in use in this country in our industry, indeed, the building trade is more of a handicraft than most.

Figures are given for one or two allied trades which may be usefully noted:—

Take the cement trade: the value of production per wage-earner per year is given as £192 for Great Britain and £472 for the United States, and the corresponding horse-power per 1,000 wage-earners is 3,195 as against 13,873.

Take lime: the corresponding figures are—United Kingdom, £141; United States, £258. United Kingdom, 701 horse-power; United States, 1,991 horse-power.

Take paint, colours, and varnish: the figures are—United Kingdom, £863; United States, £1,754. United Kingdom, 1,375 horse-power; United States, 4,012 horse-power.

The above comparisons indicate that there is the same opportunity for improvement in the building and allied industries, viz., those which supply it with materials and plant, as there is in other exporting manufacturing trades.

Now the great problem which faces this country and the building and allied trades is how to provide housing for the people on sanitary, economic, and—as far as possible—architecturally sound lines; and the thought suggests itself that study of the problem from the point of view brought out by these figures might provide a solution of the problem at once profitable, economical and satisfactory.

The writer, therefore ventures, with great respect, to make the following suggestion to the parties concerned, viz., the architectural profession, the organised employers of the building trade, the organized manufacturers of building materials, machinery and plant, and the organized workers of the building industry.

That the Royal Institute of British Architects should appoint a strong committee to take up the study of this question, that it should get into touch with the Statistical Department of the Board of Trade, to ascertain how far useful statistical information is available, and ask the Department to place facilities at its disposal for the tabulating and presentation of those statistics in a useful form.

That, having thus ascertained what, if any, further statistical information is required, it should ask the assistance of the Department in obtaining it.

That it should prepare a memorandum setting forth the position as thus revealed and circulate it to the other parties concerned, asking for them to appoint representatives to a national congress convened for the purpose of discussing the situation and formulating a plan of action to deal effectively with it.

Up to this point no great financial expense would be involved, but if the congress decided upon a plan of action which would necessarily tend to become of wide scope, considerable funds would probably be required, and it would be for those bodies concerned, who intended to participate in the work and in the benefits which would accrue from it, to provide the necessary funds.

At this point the public interest becomes of importance, for the people who would have to use houses would derive a direct benefit from the labours of the congress, in so far as those labours resulted in reducing the cost of housing, and it is probable that the Government, if properly approached, would assist the scheme by a substantial grant, seeing that it is faced with the prospect of having to make large loans for housing purposes in the near future. Our present experience in the production of munitions of war is conclusive as to the vast reserves of productive capacity which have been lying dormant in our nation; there are no two opinions about high productivity being the secret of low unit costs in the product; and the wonder is that the present upheaval has been required to bring us to a national recognition thereof.

In this way it is suggested a work of real national importance might be immediately taken in hand and brought to success.

The authors of "Eclipse or Empire," from which the writer has already quoted freely, supply an answer to the question, Why do the American industries possess more and better machinery than the English? Why has England allowed herself to be outpaced in industrial efficiency?

They say our inferiority is due to general conditions, to the employers and to the workers.

The United States has always been a high-wage country, hence the American employers were driven to use machinery so as to bring down unit costs to a point at which they could compete with European manufacturers.

British employers have not kept abreast of the times. Many were over-conservative and indifferent to progress. These were satisfied to continue working with old-fashioned or insufficient machinery. Others who wished to introduce improved machinery were prevented by the workers.

While most American workers see in the labour-saving machinery a friend, many British workers see in it an enemy, believing that improved machinery, by greatly increasing output will throw many workers out of work. That idea has prevailed in all ages, but had the hostility to labour-saving machines on the part of the workers been successful from the first, we should still be in the stone age.

Unfortunately, British industries are inferior to American, not only in mechanical output, but also in organisation. Production is cheapened and perfected by a scientific division of labour and by production on a large scale.

The building trade is a long way from any ideal of that kind; building firms *do not* specialise to any considerable extent; but they are always complaining of the advent of specialist sub-contractors upon their jobs, not recognizing the lesson such a growing state of things carries for those whose eyes are open to the immense economies in production which can be effected by a firm which specialises in a given product.

What are the consequences of the comparatively small output per worker in this country? They affect the rich and the poor, the classes and the masses, the manufacturers, the traders and the workers. As the workers are the largest body let it be noted that "about 30 per cent. of our population are underpaid, on the verge of hunger" (Sir H. C. Bannerman). That the life therefore of "one-third of the workers is an unending struggle from day to day to keep abreast of the most ordinary, the simplest, the essential needs" (Lady Bell).

It must be obvious that the wages of labour have to be paid out of the value of the things produced; the higher the latter value the greater the possible value of the wages which can be paid for the work. The book in question gives a table which shows why wages are low in this country and why they are high in the United States. For example, in boots and shoes the British worker produces net per week, according to the census of production, only 27s. 4d., while his American colleague produces 70s. In cement the first named produces £2 10s. 10d. per week, and the second £4 17s. 8d. In lime the corresponding figures are £1 13s. 5d, and £3 2s. 4d.

A new compact between employers and workers is wanted, whereby output and the free and intelligent use of labour-saving machinery may be secured to the former and a high reward in wages to the latter. Both these ends can be obtained without undue strain to either class, if they will both agree that they are desirable, that they will co-operate sincerely and sympathetically in their attainment, and that neither will seek to take advantage of the other, but loyally co-operate to secure the benefits for each and all and avoid any dangers to each and all, that may attend upon so important a change.

There may arise a fear in some minds that a development of this kind would be detrimental to the art side of constructional work, but there is no need for that to occur; there will always remain vast possibilities of art expression in the proportioning, grouping, planning and handicraft decoration of buildings. High productive organisation would affect the units of certain classes of materials, so far as their cost is concerned, and there would be an increasing tendency to standardisation of parts, but it need not affect their other qualities. On the other hand, decreased cost of the essential units of a building would make it possible to devote a larger margin to their amenities and their decorative adjuncts.

A change of the kind suggested could not come at a more favourable time for the workers. The labour market in the building trade was already short of supply before the war. It will be much shorter afterwards. The long depression which has restricted so vast an amount of building work, and the enormous restoration work required in so many countries, will ensure that phenomenal activity after the war which will facilitate the changes required and make it comparatively easier both for employers and workmen to accustom themselves to new conditions.

This is the accepted time for a great but beneficent revolution in the constructional industry of this nation, and the question is, Will it be grasped and turned to the best account by all concerned working upon it in harmonious and loyal co-operation for a great end?

Deceased Builder's Estate.

Alderman Thomas Coulson, of North Shields, builder, who died June 27, has left estate valued at £11,486.

Campbell College, Belfast. The late R. H. LYNN, R.H.A., Architect.

GENERAL BUILDING NEWS.

CINEMA, BELFAST.

The New Royal Cinema, Arthur-square, Belfast, was opened recently. The main elevation is in white glazed Carrara ware, and the returned front to Castle-lane is in red brick relieved by white Carrara dressing, &c. The principal entrance is at the corner of Arthur-square and Castle-lane, and is a circular entrance hall with marble mosaic flooring, walls panelled in mahogany, and decorated plaster ceiling. Swing doors lead direct to the stalls. The slope of the floor is so pitched as to ensure a perfect line of sight for everyone in the hall. There are three exits from this part of the auditorium, and at the back of the stalls is a tea-room. From the entrance-hall the circle is approached by a staircase with marble mosaic steps. Midway between the entrance hall and the circle is a tea-room, 55 ft. long and 16 ft. wide, with an annexe 18 ft. square. This also has a decorated ceiling and panelled walls. On this level also are the ladies' and gentlemen's retiring rooms. The circle contains 332 tip-up chairs and two boxes. On the circle floor are also the offices and biograph-room, winding-room, generating-room, &c. The main contract has been carried out by Messrs. H. & J. Martin, Ltd., of Belfast; the decorations by Messrs. F. de Jong & Co., of London; and the furnishing and upholstering by Messrs. Beck & Windiband, of Birmingham Mr. Stanley Johnston, of Belfast, has been responsible for the electric lighting and ventilation; and Messrs. Strode & Co., of London, for carrying out the gas-heating, gas-lighting and fire-resisting curtains, &c. The marble mosaic work has been done by Messrs. Diespeker, of London, and the glazed Carrara front by Messrs. Shaw's Glazed Brick Co., of Darwen. The constructional steel is by Messrs. G. Sands & Son, of Nottingham. Mr. Caleb Place acted as clerk of the works, and the whole building has been designed and erected under the personal supervision of the architect, Mr. Bertie Crewe. The furniture has been supplied by Messrs. Wright & Hunter, Gillespie & Woodside, and Robert Watson & Co., Ltd., all of Belfast.

CHURCH, GILLINGHAM.

The new church of St. Augustine's, Gillingham, was consecrated recently. The building stands on the summit of Chatham Hill. The church is planned with a wide nave and north aisle. The choir is of considerable length, and the north aisle continues along its north side forming the chapel. The vestries are placed to the north of the chapel. The nave is still incomplete as to its length; it is intended to have two more bays and a large western tower. There is a passage formed in the thickness of the wall along the south side at the window level. The roofs are of the open timber type of moderate pitch, and are stained a dark brown. A certain amount of thin red brick has been used in the internal wall facing of the lower part of the walls, and the upper wall surfaces are plastered. Externally, the walls are faced with Kentish rag, local flints being introduced irregularly amongst the stone. Weldon stone, Bath stone, and Portland stone are used in the interior. The roofs are covered with Westmorland slate. The contractors are Messrs. Sherwin, of Baston, and Mr. Temple Moore, F.R.I.B.A., is the architect.

Messrs. Robinson & Cleaver's premises, Belfast. Messrs. YOUNG & MACKENZIE, Architects.

TRADE NEWS.

Boyle's latest patent "air-pump" ventilators, supplied by Messrs. Robert Boyle & Son, ventilating engineers, 64, Holborn-viaduct, E.C., have been employed at Cox's Bank, Charing-cross, S.W.

The Denaby Main Wesleyan Church is being ventilated by means of Shorland's patent exhaust roof ventilators supplied by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

We are asked to state that, as it was most essential for the Sanatorium, Hawkmoor, to be perfectly free from the least dampness, waterproofed cement was used on the ground floors to prevent rising dampness. The powder "Pudlo" was also used in the 1½ in. cement renderings for the verandahs, and in the laundry floors which are suspended over the electric light installation.

Boyle's latest patent "Air-pump" Ventilators, supplied by Messrs. Robert Boyle & Son, Ventilating Engineers, 64, Holborn-viaduct, E.C., have been employed at the City of London Guardians' Institution, Bow-road, E.

PROPOSED NEW BUILDINGS AND OTHER WORKS.*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works, at the time of publication, have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; L.G.B. for Local Government Board; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

ABERAVON.—Several schemes for improvement after the war have been prepared by the Aberavon T.C. Some months ago compulsory powers were acquired for the purchase of land at Bagland for a new cemetery. The cost of construction of the cemetery and chapel is estimated at £4,000, without the land purchase. In addition, the Council intend proceeding with the improvement of Cwmavon-road and the laying out of a recreation ground at the beach.

ABERDARE.—Aberdare D.C. have a housing scheme in course of preparation for after the war and plans and estimates are under consideration.

ABERSYCHAN.—In the Abersychan district ground is available for housing improvements, and the local authority has completed its plans to proceed, after the war, with the building of hundreds of houses, as soon as the money is forthcoming.

ACTON.—The Council are presenting the loan division of the St. John Ambulance Brigade with land and material for the erection in Acton Vale of a first aid dressing station.

BETHNAL GREEN.—The B.C. has approved of plans for the re-drainage of Nos. 36, 38, 40, 42, 44 and 46, Roman road, and 174, Grove-road, for Mr. F. Collings.

BIRMINGHAM.—Subject to the consent of the Government departments concerned, the City Council proposes to carry out the reconstruction of a length of the Hockley main sewer at an estimated cost of £12,000.

BLAENAVON.—There is a scheme for building about 160 houses after the war. These will be erected on the Elgam Farm Estate, which has been acquired for the D.C. by Mr. Rees Jones, president of the Chamber of Trade.

BRIDLINGTON.—Plans passed by T.C.:—House and motor-house at rear, Mr. M. Parkin, for Mr. Eckles; wash-house and pantry, 1, Travis-street, Mr. F. Spink, for Mrs. Copeland; store room at Harper's Bakery, Pembroke-terrace, Mr. Thomas Spink; brick garage, Acacia Villa, Cardigan-road, Mr. J. R. Earnshaw, for Mr. Crompton; alterations and additions to the Alexandra Hotel, Mr. J. R. Earnshaw, for Mr. Newbound; alterations and additions to the Crown Hotel, Quay-road, Mr. F. A. Tugwell, for the Scarborough and Whitby Breweries, Ltd.

BURRY PORT.—The U.D.C. have in view a drainage and sewerage scheme and a public slaughterhouse, while they have asked for special authority to go on before the end of the war with a municipal housing scheme.

CARMARTHEN.—It has been decided to establish a co-operative basket factory at Carmarthen. Arrangements have been made with the Welsh Industries Association to start a factory at Carmarthen which will be worked by them in co-operation with the County Agricultural E.C.

CARNARVON.—Plans for alterations at Shop y-Porth for the Vaynol Estate are before the T.C. Approval has been given to the line of frontage of Messrs. Edward Davies' proposed new building in Crown-street.

DEWSBURY.—Plans passed by T.C.:—Shed, Ravensthorpe Mills for Messrs. Walker Bros; shed, Midland Mills, Mill-street West, for Messrs. J. Kaye & Co.; motor shed, Thornhill Lees Vicarage, for the Rev. J. E. Gofton; roofing in Mill Yard, Watergate, for Messrs. H. Burrows & Co.; chimney and tower, Savile Town Chemical Works, for Mr. W. C. Wakefield; alterations to houses, Knowles Hill, for Mr. A. J. Askhem; external iron staircase, &c., Albert Mills, Savile Town, for Messrs. J. France & Co.; covering in yard, Ravensthorpe, for Messrs. Hartley, Ltd.

EBBW VALE.—The D.C. are to proceed with the erection of a new fire station.

GLASGOW.—Linings have been granted at Glasgow Dean of Guild Court to Messrs. William Beardmore & Co., Ltd., to erect a joiners' shop and other buildings at Parkhead, and to Messrs. J. H. Carruthers & Co., Ltd., engineers, to extend their fitting shop in Hamilton Street, Polmadie.

GELLIGAER.—Works proposed to be carried out by the Gelligaer U.D.C. after the war: new road Ystradmynach to Pengam, approximate expenditure £500 for land and £25,000 for construction of works; erection of houses for working classes at Gilfach, Bargoed, estimated cost £4,050 for land and £30,000 to carry out the scheme; construction of Graigbargoed Cemetery, approximate cost £2,000; intercepting sewers in the Deri and Cylla Valleys, total length about 10½ miles, approximate cost £20,000. Works proposed to be carried out by other bodies in the Council's area: 424 cottages at Tir-y-Berth, Pengam, by Messrs. Hopkinson & Co., Worksop; 360 cottages at Cascade, Gelligaer, by the Powell Duffryn Co.; 1,000 cottages at Derwendeg, Hengoed, by a company for which Mr. W. Beddoe Rees is architect; 387 cottages at Pen-y-Bryn, Gelligaer; contractor, Mr. W. A. Richards, Dumfries-place, Cardiff.

GLYNCORRWG.—After the war Glyncorrwg Council hope to proceed with the completion of the new Avon Valley-road. They also have under consideration town planning schemes and new roads and sewers and also works for improved water supply, and schemes for workmen's dwellings in the Cymmer, Glyncorrwg, and Blaengwynfi districts.

HALIFAX.—Plans passed by T.C.:—Workshop, &c., Mile Thorn Mill, for J. Butler & Co.; sanitary conveniences, Horton-street, for G. Whitley & Son; time office and dining room, Shay-lane, for Drakes, Ltd. sanitary conveniences, Hopwood-lane, for Campbell Gas Engine Co.; boiler house, Beech-street, for Carter & Wright; conveniences, Shaw Lodge Mills, for John Holdsworth & Co. The Waterworks Committee proposes to lay 1,200 yds. of 6-in. main along Wakefield-road at an estimated cost of £900.

ILKESTON.—Plans passed by T.C.:—Dwelling house, Catherine-avenue, for Mr. W. Naughton; new stores, Rutland-street, for Mr. W. Stevens.

LEYTON.—Plans passed by U.D.C.:—Alterations and additions to "Green Man," High-road, Leytonstone, for Mr. R. Banks-Martin.

LLANELLY.—After the war works: Lady Howard has promised a site for a public hall. Sanction has been obtained for the laying out of Bigyn Park and for the erection of 66 municipal dwelling-houses. It is also suggested improving the entrances to the market and making an arcade through. In conjunction with Llanelly R.D.C. and the Burry Port U.D.C., the Llanelly B.C. will build a joint infectious diseases hospital.

MARGAM.—The D.C. will, after the war, proceed with extensive schemes immediately they secure the sanction of the L.G.B. for borrowing the money. In conjunction with the Glyncorrwg Council they hope to complete the half-finished road through the Avon Valley, opening up this district into Port Talbot. The Margam authority also propose to construct additional water works in the Duffryn Valley, and plans and estimates are now in preparation. The erection of the new blast furnaces and by-product works at Port Talbot will demand new roads and sewers.

MONMOUTHSHIRE.—After the war schemes: Pontypool U.D.C. has decided to promote a large scheme of town planning and housing. It is probable that Abersychan, Panteg, and Pontypool will jointly undertake to provide a reliable system of road passenger traffic.

MOUNTAIN ASH.—Mountain Ash Council have in hand the preparation of plans and estimates for a housing scheme which was decided upon prior to the war. As an initial step it has been decided to build 25 houses on a site at Cefnpennar.

NEATH.—The R.D.C. has decided to prepare a town-planning scheme. Other post-war schemes include a new road in the Dylais Valley to cost about £10,000, a new road to connect the Vale of Neath at Glynneath with the Dylais Valley, and the extension of waterworks throughout the district. Further important works are under contemplation in the neighbourhood of Jersey Marine, where large industries are to be erected, including works by the Anglo-American Oil Company.—The T.C. have prepared an extensive town-planning scheme, and a L.G.B. inquiry was conducted some time ago. The scheme includes the purchase of land from various owners, the making of new roads in the Llantwit district, and from the Gasworks-road into the town. Plans and estimates have been approved by the L.G.B., and the work will be proceeded with immediately the loan is granted.

PANTEG.—After the war it is proposed to provide public baths at Panteg, and the Council are ready to submit their proposals. In the parish of Llantarnam permission to proceed with a subsidiary sewerage scheme is being sought.

PONTARDAWE.—Pontardawe D.C. have a number of schemes for promotion after the war, viz., the Ynysmeudw Sewerage scheme, which is estimated to cost about £8,000; the Amman Valley Joint Sewerage scheme, estimated to cost £40,000, and the laying out of cemeteries at Clydach, Pontardawe and Gwaun-cae-gurwen. The Council is making representations with a view to proceeding immediately with the proposed Clydach cemetery.

PORT TALBOT.—After the war the Port Talbot Railway and Docks Company will proceed with new works at Port Talbot, including the erection of the breakwater, construction of new locks, deepening of the channel entrance to form a deep water entrance, and construction of new wharves and tips.

SPAIN.—Projects for the installation of water supply and sewerage systems at the town of Manzanares will be received, within a period of three months from December 3, 1916, at the "Secretaria del Ayuntamiento," Manzanares. A prize of 5,000 pesetas (about £200 at par) will be awarded for the project selected by the Municipality. The *Gaceta* of December 6 notifies that tenders will be received within a period of 30 days from that date, at the "Secretaria Municipal," Linares, for the erection of school buildings at that town at an estimated cost of about £3,700 at par.

STRATFORD-ON-AVON.—The T.C. has passed plan for a motor-house in Evesham-place.

WALTHAMSTOW.—Plans passed by U.D.C.—Chimney shaft, Pluton Works, Shernhall-street, for Messrs. T. De La Rue & Co., Ltd.; lavatories, Vintry Works, High-street, for A. G. Barton; alterations and additions, Higham Lodge, Blackhorse-lane, for Charles Barton; office buildings, &c., 89, Shernhall-street, for British Woodworkers, Ltd. Plans for the following temporary buildings have also been passed:—Garage and carpenter's shop, Blackhorse-lane, for Walter Jones & Sons; lavatories, &c., Blackhorse-lane, for Walter Jones & Sons.

WESTMINSTER.—New buildings on the sites of 37, 39, and 41, Old Queen-street, and at corner of Dartmouth-street, and Lewisham-street, for Mr. H. K. Dyson.

WOMBWELL.—At a recent meeting of the D.C. it was reported that a site for a new mortuary had been selected at the low end of the new market-place, but the subject was to be considered at the next committee meeting.

* See also our List of Competitions, Contracts, &c., on page 30.

NEW GOVERNMENT CONTRACTS.

War Office.

Tools.—Billings & Spencer Co., 8 Long-lane, Aldersgate-street, E.C.; J. Brooks (Lye), Ltd., Locks Works, Lye, Stourbridge; Buck & Hickman, Ltd., 2, Whitechapel-road, E.; Carr, Wild & Co., Ltd., Egerton-street, Sheffield; Chater Lea, Ltd., 74, Banner-street, E.C.; T. R. Ellin, Footprint Works, Sheffield; J. Evans & Sons, Ltd., Heeley, Sheffield; C. Garlick & Sons, Lynx Works, Sheffield; Hardy Patent Pick Co., Ltd., Sheffield; H. L. Hawtin, 35, Wisemore, Walsall; E. G. Herbert, Ltd., Atlas Works, Levenshulme, Manchester; Lawson & Heaton, Ltd., 315, Long-acre, Nechells, Birmingham; E. & W. Lucas, Ltd., Dronfield Forge and Shovel Works, Sheffield; Mountford, Phillips & Co., Ltd., Cambrian Engineering Works, Llantrisant; I. Nash & Sons, Ltd., Wollaston Mills, Stourbridge; J. Peace & Co., Ltd., Merchant Works, Rutand-road, Sheffield; J. Robson & Sons, Mary-street, Sheffield; Sanderson Bros. & Newbould, Ltd., Newhall-road, Sheffield; C. T. Skelton & Co., Ltd., Sheafbank Works, Sheffield; Slack, Sellars & Co., Ltd., Townhead Works, Sheffield; J. H. Smith, Roway Works, Oldbury; T. Smith & Sons, of Saltley, Ltd., Saltley Mill, Birmingham; R. Sorby & Sons, Ltd., Trafalgar-street, Sheffield; Stockton Heath Forge, Stockton Heath, Warrington; Taylor Bros., Adelaide Saw Works, Sheffield; Thewlis, Griffith & Edelsten, Ltd., Phœnix Works, Warrington; J. Watts, Lambert street, Sheffield; Whitehouse Bros., Ltd., District Works, Cannock, Staffs; C. Willetts, Junr., Ltd., Colonial Works, Cradley Heath; G. Wolfe & Sons, Ltd., West Lothian Works, Bathgate, N.B.; Wolseley Sheep Shearing Machine Company, Ltd., Alma-street, Birmingham; P. Wright & Co., Wollaston Mills, Stourbridge; Wynn, Timmins & Co., Ltd., Commercial-street, Birmingham; J. Yates & Co., Ltd., Aston Manor, Birmingham.

Works Services.—Drainage, &c., at Richmond Park: J. Garrett & Sons, 83, Balham-hill, S.W.; Electric Light Installation at Bramham Moor: G. E. Carr, Haymarket-lane, Newcastle-on-Tyne; Electric Light Installation at Narborough: Ellis & Ward, Ltd., Portugal-street Kingsway, W.C.; Electric Lights, &c., at Turnhouse: A. Arthur & Ure, 192A, St. Vincent-street, Glasgow; Gas Supply for Office Huts at Woolwich: South Metropolitan Gas Co., 709, Old Kent-road, S.E.; Generating Plant at Crowborough: Tredegars, Ltd., 7, Brook-street, W.

Erection of—Building at Farnborough: Y. J. Lovell & Son, 32, Spring-street, Paddington, W.; *Cloak Room, &c., at* Woolwich: W. F. Blay, Ltd., Royal Arsenal, Woolwich; *Converting Stables at* Dover: G. H. Denne & Son, Queen-street, Deal; *Engine Room, &c., at* Kinghorn: J. Lownie & Son, 57, Harrison-road, Edinburgh; *Extension of Offices at* Lichfield: A. Robinson, Idle, Bradford; *Horse Shelters at* Croft Spa: R. Blackett & Son, 9, Paradise-terrace, Darlington; *Hospital Wards at* Bristol: R. Wilkins & Sons, 20, Bishop-street, Bristol; *Huts at* Hawarden and Northwich: M. Browne, Ltd., Cow Bridge-lane, Chester; *Huts at* Upleen: Whiting Bros., Ospringe, Faversham; *Sheds at* Haggerston: A. Robinson, Idle, Bradford: *Sheds at* Whitburn: W. & J. R. Watson, Ltd., Iona-street, Edinburgh; *Shelters at* Haggerston: S. Miller, North-street, Newcastle-on-Tyne; *Water Plant at* Farnborough: The Patterson Engineering Co., Ltd., Windsor House, Kingsway, W.C.; Babcock & Wilcox, Ltd., Oriel House, Farringdon-street, E.C.

Maintenance of W.D. Buildings at—Hilsea: E. & A. Sprigings, Stamshaw, Portsmouth; Kinsale: Denis Ford, Ballincollig, Cork; London: Triggs & Co., 92, The Chase, Clapham, S.W.; Southampton: H. G. Ross, R.V. Hospital, Netley.

India Office: Store Department.

Bolts.—C. Richards & Sons, Darlaston.

Couplings.—P. & W. Maclellan, Glasgow.

Drills.—L. Behrens & Sons, Portland-street, Manchester.

Drills.—Armstrong, Whitworth & Co., Openshaw.

Fishbolts and Spikes.—Guest, Keen & Nettlefolds, London Works, nr. Birmingham; G. Cooper & Sons, Sheffield.

Flues.—Superheater Corporation, Ltd., Palace Chambers, Westminster.

Paint.—L. Berger & Sons, Homerton, N.E.

Whitelead.—T. & W. Farmiloe, Rochester-row, S.W.; Brimsdon Lead Co., Ponders End.

H.M. Office of Works.

Building Works.—Custom House, E.C., Temorary Building: Hall, Beddall & Co., Pitfield Wharf, Waterloo Bridge, S.E. London Postal Censor's Office, Temporary Additional Storey: Galbraith Bros, Ltd., 63, Waterloo-street, Camberwell, S.E. Netley, Erection of Kitchen Buildings: A. E. Jukes & Son, Paynes-road, Southampton. *Pall Mall Gazette* Office, Alterations, &c.: Leslie & Co., Ltd., Kensington-square, W. Regent's Park Censor's Building, Roadway: John Mowlem & Co., Ltd., Grosvenor Wharf, Westminster, S.W. Victoria Embankment, Offices for Director-General of Military Railways: Thomas & Edge, 79, New-road, Woolwich, S.E. War Office, St. James's Park, Extension: H. Hann, 40, High-street, Colliers Wood, Merton, S.W.

Engineering Works, &c.—Regent's Park Sorting Office Extension, Heating Apparatus: W. Watkin & Son, 243A, High-road, Wood Green, N. Regent's Park Censor's Building, Heating Apparatus: Cannon & Hefford, Stanbury-road, Peckham, S.E. Stationery Store Extension, Heating Apparatus: W. Watkin & Son, 243A, High-road, Wood Green, Supply of Engineering Labour in Daywork during period of one year from 1st January, 1917, in the following districts: London (East): Wilson & Smith, Ltd., 7 & 8, King William-street, West Strand, W.C.; London (West): James Simpson & Co., Ltd., Grosvenor-road, S.W.; Bristol: The Colston Electrical Co., 9, Denmark-street, Bristol; Dover: The Dover Engineering Works, Ltd., Dour Iron Foundry, Dover; Edinburgh: Mackenzie & Moncur, Ltd., Balcarres-street, Edinburgh; Glasgow: Bennett & Rutherford, 10, Blythswood-square, Glasgow. War Trade Department, Heating Apparatus: Palowker & Sons, 90 and 91, Queen-street, E.C.; Electric Wiring: Foote & Milne, Ltd., 66, Victoria-street, S.W.

Furniture.—Bookcases: The North of England School Furnishing Co., Ltd., Darlington; Cowling Bros., Skimpton-road, Silsden, nr. Keighley. Desks: G. M. Hammer & Co., Ltd., St. James's-road, Bermondsey, S.E. Filing and Card Index Cabinets: Friend, Cocks & Co., Sedan-street, Ipswich; E. Pollard & Co., Ltd., 29, Clerkenwell-road, E.C.; Thomas Bradford & Co., Crescent Ironworks, Salford; Kingfisher, Ltd., West Bromwich; The North of England School Furnishing Co., Ltd., Darlington; The Globe Wernicke Co., Ltd., 222, Kensal-road, W. Presses: Nicholson & Lord, 19 and 20, Vicarage-place, Walsall; H. D. Burton, King-street, North Shields; F. R. Martin & Co., Manor-road Works, Streatham Common, S.W.; W. J. & C. T. Young, 82, Gigant-street, Salisbury; Venesta, Ltd., 1, Great Tower-street, E.C. Presses and Bookcases: Thomas Bradford & Co., Crescent Ironworks, Salford. Trestle Tables: The North of England School Furnishing Co., Ltd., Darlington.

Post Office.

Bolts, Arm.—Bayliss, Jones & Bayliss, Ltd., Wolverhampton; F. W. Cotterill, Ltd., Darlaston; Guest, Keen & Nettlefolds, Ltd., Birmingham; Portland Bolt and Nut Co., Ltd., Birmingham.

Brackets, Pole.—Bullers, Ltd., Tipton, Staffs.

Roofs, Pole.—Baldwins, Ltd., Blackwall, E.

Tate Gallery Extension.

The *Morning Post* understands that a well-known art dealer, formerly of Bond-street, has offered to provide a new wing to the Tate Gallery for the exhibition of modern Continental pictures and sculptures, already the property of the nation, and, of course, for future acquisition of similar works.

RATES OF WAGES IN THE BUILDING TRADE.

THE following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that may occur:—

—	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Aberdare	9½	9½	9½	9½	9½	9	8	6½	6½	6½
Accrington	10½	10	10	9½	9	10	9½	6½	6½	6½
Altrincham	9½	10½	11	10	8½	11½	10	7½	7½	7½
Ashton-under-Lyne	11	11	10½	10½	9½	11	10	7	7½	8
Barnsley	10	10	9½	9½	9	9½	8½	7½	7½	7½
Barrow-in-Furness	10½	11	10½	10½	10½	10½	10½	8	8	8
Barry	9½	9½	9½	10	—	9	8½	6½	6½	6½
Bath	9	9	9	8½	8½	9	8	6½	6½	6½
Bedford	8	8	9	8½	8	9	6½	5½	5½	6½
Birkenhead	1/-	1/-	1/-	1/-	1/-	1/-	11	8	8	8
Birmingham	11½§	11½§	11½§	11½§	10½§	11½§	10½§	8½§	8½§	8½§
Bishop Auckland	9	9	9	9½	11	9	8	6½	6½	7½
Blackburn	10½	10½	10	10	9½	11	9½	7½	8	8
Blackpool	11	9½	9½	9½	8½	9½	9½	6	6	6
Bolton	10½	11	11	10½	10	10†	9½	6–7	7	7½
Bournemouth	8½	9	9	9	8½	9	8½	6½	6½	6½
Bradford	10½†	10½†	10†	10½†	10†	10†	9½†	8½†	8½†	8½†
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	9½	9½	9½	9½	—	9½	8	7	7	7
Bristol	11	11	11	11	—	11	10	8½	8½	8½
Burnley	10½	10½	10½	9½	8½	9½	9½	7	7½	7½
Burton-on-Trent	9½	9½	9½	10	9	9½	8½	7	7	7
Bury	11	11	10½	9½	10	10½	10	7	7½	7½
Cambridge	9½	9	9	9½	9½	9½	7½	6	6	6
Cardiff	10½	10½	10½	10½	10½	10½	9½	7½	7½	7½
Chatham	8½	10	10	9½	9½	10	8½	7	7	7
Chelmsford	8	7½	8½	9	—	7½	6½	5	5	6½
Cheltenham	9½	9½	9½	9½	—	9½	9½	6½*	6½*	6½*
Chester	9½	10½	10	9½	9½	10½	9½	6½	7	7
Chesterfield	9	9½	9	8	9	8½	8½	5½	5½	5½
Colchester	8	8½	8½	8	9	9	8	5½	5½	5½
Coventry	11	11	11	10½	11	11	10	8½	8½	9
Crewe	7½	8	7½	9	8½	8½	8	5½	5½	6
Darlington	9½	10	10½	10½	10	9½	9	7	7	7
Derby	9½	10	9½	9	9	9½	8	7	7	7½
Doncaster	9½	9½	9½	9½	9½	9	8	6½	6½	7½
Dudley	9½	10	10	10	10	9½	8½	6½	6½	7
Durham	9½	9½	9½	9½	10	9	8½	6½	6½	7
East Glam. and Mon. Valleys	10	10	10	10	—	—	9	7	7	7
Exeter	8	8½	8½	8½	7½	7½	7½	5½	5½	5½
Folkestone	8½	9	9	9½	8½	9	8	7	7	7
Gloucester	8	9½	9½	8½	8½	9½	8	7	7	7
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	11	11	—	—	11	9½	9	9	9
Grimsby	9	9	9½	9½	9	9	8½	7	7	8
Great Yarmouth	8	8	8	—	8	8	6½	5	5	—
Halifax	10	10	9½*	9	9	9	9½	8	8	8
Harrogate	10½	9½	10	9	8	10	8½	7½	7½	7½
Hartlepools	10½	11	11	11	11	10½	9	8	8	8½
Hastings	8½	8	8	8½	8	8	7	6½	5½	6½
Hereford	8	8	7½	8½	8	7	7	5½	5½	5½
Huddersfield	11	11	10½	9½	10	9	8½	7½	7½	7½
Hull	11	10½	10½	10½	10½	10	9	8½	8½	8½
Ipswich	8½	9	9	9	9	9½	7½	6	6	6
Lancaster	10½	10	10	10	9	10	9	6	6½	7½
Leamington Spa	9	9½	9½	8½	9	9½	8½	6½	6½	6½
Leeds	10½	10½	10½	10½	10½	11	9	8	8	8½
Leicester	10½	10½	10½	10½	11	10½	9	8	8	8½
Lincoln	9	9½	9½	9	8½	8½	8	6	5½	6½
Liverpool	1/-	1/-	1/-	11½	11½	1/-	10½	8	8	8
Llanelly	9½	9½	9½	8½	9	8½	8	5½	5½	5½
London	1/0½	1/0½	1/0½	1/0½	—	1/1	10	9	9	9
Loughborough	9	8½	9½	9	9	9	8½	7	7	7
Luton	9½	9	9½	8½	9	8½	7½	6½	6½	6½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	11	11	1/-	1/-	10	1/-	10½	7½	7½	8½
Mansfield	8½	10	9½	8½	—	9½	9	7	7	7
Merthyr Tydfil	9½	9½	9½	9½	9½	9	8½	6½	6½	6½
Middlesbrough	10½	11	11	11	11	10½	9	8	8	8½
Newcastle-on-Tyne	11½	11½	11½	11½	11	10½	10	8½	8½	8½
Newport, Mon.	10	10	10	10	8½*	10	9½	7	7	7
Northampton	10	10	10	10	10	10	9	7½	7½	7½
Norwich	8½	8½	8½	8½	8	8½	7½	6	6	6
Nottingham	1/-	1/-	1/-	11½	11½	1/-	10	9½	9½	10
Oldham	11	11	11	10	10	10†	9½	7½	7½	7½
Oxford	9½	9	9	9	8	9	8	6½	6½	6½
Plymouth	9*	9*	9*	9*	9*	9*	8½	7*	7*	7*
Pontypridd	9½	9½	9½	9½	9½	9½	9	6½	6½	6½
Portsmouth	10½	10½	10½	10½	10½	9½	8½	8	8	8
Preston	10½	10½	10½	10½	10½	11	9½	6	7	8
Reading	9	9½	9½	10½	—	9½	8½	6½*	6½*	6½
Rochdale	10½	10½	10½	10	9½	11	9½	7½	7½	7½
Rochester	8	10	10	9	9	10	8½	7	7	7
Rugby	10	10	10	10½	11	10	9	7	7	8
St. Albans	9	9	9	9–10	9	9–10	8	7	7	7
St. Helens	9	9½†	10†	9½	9½	9½	10½	6	6½	6
Scarborough	9	9½	9	8½	8	9	8	7	7	7
Sheffield	10½	10†	10½†	9½	10½	11	9	7½	7½	7½
Shrewsbury	8½	9½	9½	9½	—	8½	7	6½	6½	6½
Southampton	10½	10½	10½	10½	10½	10½	9½	7½	7½	7½
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6
Southport	11	10	10½	10	10	10‡	10	7	7½	7½
South Shields	11½	11½	11½	11½	11	10½*	10	8½	8½	8½
Stockport	11	10½	10½	10½	10½	10	9½	7	7½	7½
Stockton-on-Tees	10½	11	11	11	11	10½	9	8	8	8½
Stoke-on-Trent	10	10½	10	10	—	9½	9½	7	7	7½
Stroud	8	8	8	8	7½	7½	7½	6	6	6
Sunderland	11	11½	11½	11	11	9½	9½	8	8	8½
Swansea	10½	10½	10½	10½	10½	9	10	7½	7½	7½
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Torquay	8	8	8	8	8	8	8	6	6	6
Wakefield	10	10	9*	9½	8½	9	9	7½	7½	7½
Walsall	10½	10	10	10	9½	10	8½	7½	7½	7½
Warrington	8½	10½	10½	10½	8½	10½	9½	6½	6½	6½
West Bromwich	11	11	10½	10½	—	10	9	8	8	8
Wigan	10½	11	10½	10	9½	10½	9½	7	8	7
Windsor	9	9	9	10	—	9	—	6	6	6
Wolverhampton	10½	10½	10½	11	8	10	9	7½	7½	7½
Worcester	9	9½	9½	9½	9½	9½	8	6½	6½	6½
York	9½	9½	9½	9½	10	9½	8½	7	7	7

The Masons' rate given is for bankers; fixers usually ½d. per hour extra.

*War bonus of 2s. per week granted. †War bonus of 3s. per week granted. ‡War bonus of 2s. 6d. per week granted. § 1d. per hour extra for men engaged on munition work.

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. **Those with an asterisk (★) are advertised in this number:** Competitions, —; Contracts, —; Public Appointments xlvi; Auction Sales, l. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

BUILDING AND PAINTING.

JANUARY 6.—**Dundee.**—SHELTER.—For shelter, &c., at Western Necropolis. Plans, &c., at the Office of the Subscriber, Mr. W. H. Blyth Martin, Town Clerk, City Chambers, Dundee.

JANUARY 9.—**London.**—WOOD PAVING WORKS.—For supplying and laying about 9,000 super. yards of wood paving, on concrete to be laid by the Lewisham B.C., in the carriageways of Brownhill-road (parts of) and Catford-hill (part of), Catford. Plans, &c., at the Town Hall, Catford (Surveyor's Department).

JANUARY 11.—**Belfast.**—PAINTING.—The Markets Committee invite tenders for painting at the Public Abattoir, Stewart-street. Specification, &c., at the Office of the City Surveyor, City Hall.

FEBRUARY 7.—**Lancashire.**—PAINTING.—The Directors of the Lancashire & Yorkshire Railway invite tenders for painting at various places. Forms, &c., at the Engineer's Office, Hunt's Bank, Manchester.

NO DATE.—**Cockburnspath.**—ALTERATIONS, &c.—For mason, joiner, plumber, plaster, and slater works of alterations and additions to Stottencleugh Farm-house, Cockburnspath. Schedules of Messrs. Thoms & Wilkie, Architects, 46, Reform Street, Dundee.

NO DATE.—**Corraghoe.**—CREAMERY.—For the building of a new creamery for the Committee of the Corraghoe Co-operative Creamery, Ltd. Plan, &c. of Mr. E. Murphy, Corraghoe, Stradone.

NO DATE.—**Newcastle-on-Tyne.**—BRIDGE.—**Design and estimates for bridge. Plans, &c., can be seen at Elswick Lead Works, Newcastle-on-Tyne.**

ENGINEERING, IRON, AND STEEL.

JANUARY 11.—**West Ham.**—BOILERS, &c.—The Council invite tenders for (a) one water tube boiler, (b) one 3,000 K.W. turbo alternator. Specifications, &c., from Mr. J. W. Beauchamp, Engineer and manager, 84, Romford-road, Stratford. Deposit £1.

JANUARY 18.—**Devizes.**—PUMPS AND BOILER.—The Corporation are replacing a set of steam-driven deep-well pumps which are in thorough working order, and are capable of delivering approximately 8,000 gallons per hour. The Corporation invite tenders for the above and a Cornish boiler. Further particulars from Mr. W. J. Rendell Baker, Engineer and Manager, Northgate-street, Devizes.

FURNITURE, MATERIALS, etc.

JANUARY 11.—**London.**—DRESSING CHESTS.—Supply to the Commissioners of H.M. Works, &c., of 300 oak dressing Chests (with glass). Forms, &c., of the Controller of Supplies, H.M. Office of Works, &c., King Charles-street, Westminster, London, S.W.

JANUARY 15.—**Plymouth.**—MATERIALS.—Supply to the Corporation of builders' materials. Schedules of Mr. James Paton, Borough Engineer and Surveyor, Municipal Offices, Plymouth. Deposit £1.

ROAD, SANITARY, AND WATER WORKS.

JANUARY 10.—**Hampstead.**—PAVING, &c.—The B.C. invite tenders for paving works, &c. Forms of Mr. Arthur P. Johnson, Town Clerk, Town Hall, Hampstead.

JANUARY 13.—**Brentford.**—GRANITE CHIPPINGS.—Supply to the U.D.C. of 250 yards of ¾ in. Guernsey granite chippings. Forms, &c., of Mr. J. W. Croxford, Surveyor, Clifden House, Boston-road, Brentford.

JANUARY 13.—**Hatfield.**—GRANITE, &c.—Supply to Hertfordshire C.C. of granite, slag and tar-macadam. Forms, &c., of Mr. J. S. Killick, County Surveyor, County Surveyor's Office, Hatfield.

JANUARY 17.—**Merthyr.**—STONEWARE-PIPES.—Merthyr and Aberdare Joint Farms Management Committee invite tenders for the supplying, laying, and jointing of about 760 yards of 12-in. and 9-in. stone-ware pipes on their farm lands at Troedyrhiw, together with the fixing of distributing sluices and other contingent works. Plans, &c., of Mr. W. R. Harris, Clerk to the Committee, Town Hall, Merthyr Tydfil.

JANUARY 18.—**Woodbridge.**—ROAD MATERIAL.—Supply to the R.D.C. of road material. Mr. George Cook, District Surveyor, Ipswich-road, Woodbridge.

JANUARY 20.—**Wells (Somerset).**—STEAM ROLLING, &c.—Somerset C.C. invites tenders for steam rolling and scarifying on main roads in the Long Ashtons Division during the year ending March 31, 1918. Specifications, &c., from Mr. Gordon R. Folland, Acting County Surveyor, Wells, Somerset.

JANUARY 20.—**Worcester.**—GRANITE, &c.—Supply to the Worcestershire C.C. of granite, blast-furnace slag and tar-macadam. Conditions of contract, &c., of Mr. C. F. Gettings, County Surveyor, 30, Foregate street, Worcester.

JANUARY 20.—**Chelmsford.**—TEAM LABOUR, &c.—The Essex C.C. invite tenders for the year ending March 31, 1918, for team labour, stoneware pipes, Norwegian granite kerb and setts, York kerb, &c., distilled tar. Forms, &c., at the County Surveyor's Office, Chelmsford. Mr. Percy J. Sheldon, M.Inst.C.E., County Surveyor.

JANUARY 21.—**Midhurst.**—BROKEN GRANITE.—Supply to the R.D.C. of broken granite. Forms of Mr. Arthur G. Gibbs, Surveyor to the Council, Council Offices, Midhurst.

JANUARY 22.—**Surbiton.**—TAR.—Supply to the U.D.C. of refined or distilled tar. Specifications, &c., of the Surveyor to the Council, Council Offices, Ewell-road, Surbiton.

Auction Sales.

★ JANUARY 16, &c.—**Hackney, N.E.**—Mr. H. W. Smith will sell by auction, at 215, Mare-street, Hackney, N.E., the machinery, stock, contractor's plant, tools and stock-in-trade of a cartage, excavating and road contractor.

★ JAN. 24, ETC.—**Shoreditch.**—Messrs. J. T. Skelding & Co. will sell by auction at 56-59, High St., Shoreditch, N.E., the stock of a Marble Merchant.

★ JANUARY 30.—**Deddington.**—Messrs. Fuller, Horsey & Co., will sell by auction at the works of Franklin (Deddington), Ltd., Deddington, Oxon, extensive stock of timber builders' stock and plant, &c.

Public Appointment.

★ JANUARY 9.—**Bermondsey.**—SANITARY INSPECTORS.—The Bermondsey B.C. require four temporary sanitary inspectors. Salary £150 per annum.

[Those with an asterisk (*) are advertised in this issue.]

THE HOUSING QUESTION, DUBLIN.

At a recent weekly lunch meeting of the Dublin Rotary Club, in the Central Hotel, Exchequer-street, Professor Patrick Abercrombie, Liverpool University, spoke on the subject of "Interdependence of Housing and Transport." In the course of his address he said the subject of Dublin appeared to be the most interesting problem that one could possibly have to deal with. There were two special features which gave it particular interest, and made one feel that it was possible to arrive at some sort of solution. The first was the definiteness of their housing problem. Instead of having to provide for an indefinite period of town growth they had the problem before them of rehousing a large number of people which ought to be and was being undertaken. The departmental figures showed that 64,000 had to be rehoused, and that gave them something definite to work on. The second feature was the peculiar position of Dublin from the fact that during the last century it had not, as a town, grown to any large extent. In some English towns they had terrible problems to face, such as buying valuable houses and widening existing roads. In Dublin they had escaped that. They might be compared more to Continental towns; they had been congested in a smaller area. They had now the unique chance of improving themselves without that enormous expenditure which was necessary in so many of their English towns. Those who laid out Dublin in the eighteenth century had extraordinarily fine ideas. He did not know any other town that had a circular road such as they had laid out without any ideas of fortifications. It was a splendid asset they had to help them. It gave them access from different parts in an admirable way. What were they to do with the 64,000 people that wanted rehousing? One solution was to make use of vacant land and derelict sites within the town, which they estimated came to something like 300 acres. That, at the rate of 100 people for an acre, would rehouse 30,000 in good houses. They must look further ahead, however, and see what was the general density of population in Dublin. Taking the greatest density and subtracting areas such as the Liffey, Trinity College, factories, &c., they found that the existing density was only 95.8 per acre of the inhabitants. The figure he took in preparing his plans was 75 people per acre, and that gave them the number 59,000 who should be taken out of the centre of the city in order to relieve congestion.

[This is an interesting example of design from the recent Arts and Crafts Exhibition, which would be very suitable for reproduction in Della Robbia Ware.]

PRICES CURRENT OF MATERIALS.

[Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry. Since our last issue sheet lead has advanced and oils have been reduced.—Ed.]

*** Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

Per 1000 Alongside, in River Thames.	£ s. d.
Best Stocks	2 2 0
Picked Stocks for Facings	2 14 0

Per 1000, Delivered at Railway Depot, London.

	£ s. d.		£ s. d.
Flettons	1 13 0	Best Blue Pressed Staffordshire	5 7 0
Best Fareham Red	2 12 0	Do. Bullnose	5 12 0
Best Red Pressed Ruabon Facing	5 5 0	Best Stourbridge Fire Bricks	7 0 0
Glazed Bricks—		D'ble Str'tch'rs	18 17 6
Best White, Ivory, and Salt Glazed Stretchers	13 7 6	D'ble Headers	15 17 6
Headers	12 17 6	One Side and two Ends	19 17 6
Quoins, Bullnose and 4½in. Flats	16 17 6	Two Sides and one End	20 17 6
		Splays and Squints	18 7 6

Second Quality, £1 per 1,000 less than best.

	s. d.	
Thames Ballast	8 3	per yard, delivered.
Thames and Pit Sand	9 6	„ „ „
Best Washed Sand	10 0	„ „ „
¾ in. Shingle for Ferro-Concrete	8 6	„ „ „

Per ton, delivered.

	£ s. d.		£ s. d.
Best Portland Cement	2 5 0	..	2 8 0

Do. £2 1s. alongside in 80-ton lots.
Ferrocrete 2s. 6d. per ton extra on above.
Best Ground Blue Lias Lime 1 5 6 at rly. depot.
NOTE.—The cement or lime is exclusive of the ordinary charge for sacks.
Grey Stone Lime ..... 19s. 0d. per yard delivered.
Stourbridge Fireclay in s'cks 35s. 0d. per ton at rly. dpt

STONE.

	s. d.
Bath Stone—delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	1 7
Do. do. delivered in railway trucks at Nine Elms, L. & S.W.R., per ft. cube	1 8½
Do. do. delivered on road waggons at Nine Elms Depôt	1 9½
Portland Stone—	
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Westbourne Park, G.W.R., South Lambeth, G.W.R., or Nine Elms, or L. & S.W.R., per ft. cube	2 5½
Do. do. delivered on road waggons at Pimlico Wharf or Nine Elms Depôt, per ft. cube	2 6½
White basebed, 2d. per ft. cube extra.	

Random Blocks—Per Ft. Cube, delivered at Rly. Dpôt.

	s. d.		s. d.
Ancaster in blocks	2 0	Closeburn Red	
Beer in blocks	1 7½	Freestone	2 2
Grinshill in blocks	2 4	Red & White Mansfield random block	2 9
Darley Dale in blocks	2 5	Yellow Magnesian Limestone do. do.	3 3

York Stone—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.	s. d.
Scappled random blocks	3 4

Per Ft. Super. Delivered at Railway Depôt.

6 in. sawn two sides landings to sizes (under 40 ft. super.)	2 5
6 in. rubbed two sides, ditto	2 8
3 in. sawn two sides slabs (random sizes)	1 0½
2 in. to 2½ in. sawn one side slabs (random sizes)	0 8½
1¼ in. to 2 in. ditto, ditto	0 6½

Hard York—

Per Ft. Cube, Delivered at Railway Depôt.

	s. d.
Scappled random blocks	3 0

Per Ft. Super., Delivered at Railway Depôt.,

6 in. sawn two sides landing to sizes (under 40ft. super.)	2 3
6 in. rubbed two sides ditto	2 7
3 in. sawn two sides slabs (random sizes)	1 0
2 in. self-faced random flags	0 5

TILES.

	Per 1,000 f.o.r. London. £ s. d.
Best machine-made tiles or hand-made sand-faced tiles from either Broseley or Staffordshire district	2 12 6
Ornamental ditto	2 15 0
Hip and valley tiles (per dozen)	0 5 6

SLATES.

	Per 1,000 of 1,200 f.o.r. London. £ s. d.
Best Blue Bangor Slates, 20 by 10	12 0 0
First quality „ „	11 15 0
„ „ 16 by 8	6 0 0
Best Blue Portmadoc, 20 by 10	11 17 6
First quality „ „	11 7 6
„ 16 by 8	6 0 0

WOOD.

Best Building Redwood. Imported sizes.	Nominal. Per standard. £ s. d.		£ s. d.
Deals: 4 in. by 12 in., 4 in. by 11 in., 3 in. by 11 in., 4 in. by 9 in., and 2 in. by 11 in.	36 0 0	..	38 0 0
9 in. by 9 in., 2½ in. by 9 in., and 2 in. by 9 in.	35 0 0	..	37 0 0

WOOD (*Continued*).

Best Building Redwood.	Per standard. £ s. d.		£ s. d.
Battens: 2 in., 2½ in., and 3 in. by 8 in.			
2 in., 2½ in., and 3 in. by 7 in.			
2 in., 2½ in., and 3 in. by 6 in.	33 0 0	..	35 0 0
Scantlings: 2 in. by 3 in., 2 in. by 3½ in., 2 in. by 4 in., 2 in. by 4½ in. .. 3 in. by 4 in., and 3 in. by 4½ in.			
Boards: 1 in., 1¼ in., and 1¼ in. by 6 in. and 7 in.	0 10 0	}	more than battens.
¾ in.	1 0 0		
Seconds	1 0 0		less than best
Best Middling Dantzic and Memel Fir Timber Logs (average specification)	Per load of 50 ft. cube. 14 0 0	..	—

Stocks very limited.

Sawn pitch pine logs (about 35 cu. ft. average)	Per load. 14 0 0	..	15 0 0
Do. 6 in. to 10 in.	12 0 0	..	13 0 0

Per standard.

Best Pitch Pine Deals	36 0 0	..	46 0 0
Under 2 in. thick	0 10 0 extra.		

Joiners' Wood.

White Sea First Quality			
Red: 4 in. by 11 in.	43 0 0	..	44 0 0
3 in. by 11 in., and 2 in. by 11 in.	42 0 0	..	43 0 0
4 in. by 9 in.	38 0 0	..	39 0 0
3 in. by 9 in., and 2½ in. by 9 in.	37 0 0	..	38 0 0
9 in. by 11 in. boards	1 0 0	..	more than deals.
7 in. and 8 in. battens	34 0 0	..	35 0 0
7 in. and 8 in. boards	1 0 0	..	more than battens.
Archangel White Deals—			
Best 3 in. by 9 in. and 10 in. and 11 in.	40 0 0	..	44 0 0
Seconds, do.	2 0 0		less than best.
U.S. Battens	31 0 0	..	33 0 0

Prepared Floorings and Matchings, Seconds Swedish Red and equal—

	Per square actual.		
1¼ in. by 6½ in. planed and shot	2 3 0	..	2 5 0
1¼ in. by 6½ in. planed and matched	2 4 0	..	2 6 0
1 in. by 6½ in. planed and shot	1 12 0	..	1 14 0
1 in. by 6½ in. planed and matched	1 13 0	..	1 15 0
¾ in. by 6½ in. planed, matched, and beaded, or V jointed	1 6 0	..	1 8 0
1 in. by 6½ in. do.	1 10 6	..	1 12 0

Columbian or Oregon Pine, best quality	Per standard. 50 0 0	..	55 0 0
Yellow Pine—First regular sizes	57 0 0	upwards.	
Oddments	43 0 0	„	
Seconds, regular sizes	44 0 0	„	
Oddments	38 0 0	„	
Kauri Pine—Planks per ft. cube	0 8 0	..	—
Wainscot Oak Logs, per ft. cube	0 10 6	..	0 12 6
Dry Wainscot Oak, per ft. super, as inch	0 1 0	..	0 1 3
¾ in. do. do.	0 0 10	..	0 1 0
Dry Mahogany—Honduras, Tabasco, per ft. super, as inch	0 1 0	..	0 1 4
Cuba, Mahogany	0 1 6	..	0 2 6
Dry Walnut, American, per ft. super, as inch	0 1 0	..	0 1 3
French, "Italian," Walnut	0 1 0	..	0 1 6
Teak, per load (Rangoon or Moulmein)	26 0 0	..	30 0 0
Do. do. (Java)	24 0 0	..	26 0 0
American Whitewood planks, per ft. cube	0 8 6	..	0 9 0
Glue, per cwt.	3 15 0	..	3 19 0

METALS.

JOISTS, GIRDERS, &c.

Rolled Steel Joists, ordinary sections, basis price
Plain Compound Girders, ordinary sections
Plain Compound Stanchions
Angles, Tees, and Channels, ordinary sections
Flitch Plates
Cast Iron Columns and Stanchions, plain ordinary patterns

Prices controlled by the Ministry of Munitions.

Wrought-Iron Tubes and Fittings—
Discounts off Association Prices.

	Tubes. Per Cent.	Fittings. Per Cent.
Gas at works	47½	50
Water „	42½	47½
Steam „	37½	45
Galvanised gas at works	30	42½
„ water „	21½	40
„ steam „	15	37½

L.C.C. Soil Pipe—

	Pipes Coated. s. d.		London Prices. Bends. s. d.		Branches. s. d.
2 in.	2 7	....	1 10	....	2 2
2½ in.	3 0	....	2 0	....	2 9
3 in.	3 9½	....	2 2	....	3 4
3½ in.	4 2	....	2 9	....	3 10
4 in.	4 6½	....	3 1	....	4 5

Rain-Water Pipes, &c.

	Pipe. s. d.		London Prices. Bends. s. d.		Branches. s. d.
2 in.	1 10½	....	1 0	....	1 4
2½ in.	2 1	....	1 2	....	1 8
3 in.	2 4½	....	1 5	....	2 2
3½ in.	2 11½	....	1 9	....	2 7
4 in.	3 2	....	2 1	....	3 1

METALS (*Continued*).

L.C.C. Drain Pipes—	London Prices.		
4 in., 4s. 6d. .. 5 in., 5s. 6d. .. 6 in., 6s. 6d.			
Per ton, in London.			
Iron—	£ s. d.		£ s. d.
Common Bars	16 0 0	..	—
Staffordshire Crown Bars—good merchant quality	16 0 0	..	17 0 0
Staffordshire "Marked Bars"	17 10 0	..	18 0 0
Mild Steel Bars	18 0 0	..	18 10 0

Steel Bars, Ferro-Concrete quality, £18 basis price.

Hoop Iron, basis price	20 0 0	..	20 10 0
„ „ Galvanised	33 0 0	..	—

(* And upwards, according to size and gauge.)

Sheet Iron Black—			
Ordinary sizes to 20 g.	21 0 0	..	21 10 0
„ „ 24 g.	22 0 0	..	22 10 0
„ „ 26 g.	23 0 0	..	23 10 0
Sheet Iron, Galvanised flat, ordinary quality—			
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	31 0 0	..	—
Ordinary sizes to 22 g. and 24 g.	31 0 0	..	31 10 0
Ordinary sizes to 26 g.	34 0 0	..	—
Sheet Iron, Galvanised, flat, best quality—			
Ordinary sizes to 20 g.	34 0 0	..	—
—— „ 22 g. and 24 g.	34 10 0	..	—
Ordinary sizes to 26 g.	37 10 0	..	—
Galvanised Corrugated Sheets—			
Ordinary sizes, 6 ft. to 8 ft. 20 g.	29 0 0	..	—
Ordinary sizes, 22 g. and 24 g.	29 10 0	..	—
Ordinary sizes, 26 g.	30 0 0	..	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	23 10 0	..	—
Best Soft Steel Sheets, 20 g. and 24 g.	23 15 0	..	—
Best Soft Steel Sheets, 26 g.	25 10 0	..	—
Cut Nails, 3 in. to 6 in.	25 0 0	..	26 0 0

(Under 3 in., usual trade extras.)

LEAD, &c.

Delivered in London.

Lead—Sheet, English, 4 lb. and up	£ s. d.	..	—
Pipe in coils	42 15 0	..	—
Soil pipe	42 5 0	..	—
Compo pipe	45 5 0	..	—
	45 5 0	..	—

NOTE—Country delivery, 20s. per ton extra; lots under 5 cwt., 1s. 6d. per cwt. extra.

Copper—			
Strong Sheet ..... per lb.	0 1 6	..	—
Thin „ ..... „	0 1 8	..	—
Copper nails ..... „	0 1 6	..	—
Copper wire ..... „	0 1 8	..	—
Brass—			
Strong Sheet ..... „	0 1 6	..	—
Thin „ ..... „	0 1 8	..	—
Tin—English Ingots „	0 1 10	..	—
Solder—Plumbers' „	0 0 10	..	—
Tinmen's „	0 1 1	..	—
Blowpipe „	0 1 2	..	—

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

Per Ft.		Per Ft.
15 oz. fourths .... 4d.	26 oz. thirds	6½d.
„ thirds .... 4½d.	32 oz. fourths	6½d.
21 oz. fourths .... 5d.	„ thirds	8d.
„ thirds .... 5½d.	Fluted Sheet, 15 oz.	5½d.
26 oz. fourths .... 5½d.	„ 21 oz.	6½d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES. Per Ft.

⅛ Rolled plate	4d.
⅜ Rough rolled and rough cast plate	4½d.
½ Rough rolled and rough cast plate	4½d.
Figured Rolled, Oxford Rolled, Baltic Oceanic, Arctic Muffled, and "Stippolyte," white	4½d.
Ditto, tinted	6½d.
Rolled Sheet	4½d.

PAINTS, &c.

	£ s. d.
Raw Linseed Oil in pipes ..... per gallon	0 4 4
„ „ „ in barrels ..... „	0 4 5
„ „ „ in drums ..... „	0 4 9
Boiled „ „ in barrels ..... „	0 4 7
„ „ „ in drums ..... „	0 4 11
Turpentine in barrels ..... „	0 4 6
„ in drums ..... „	0 4 8
Genuine Ground English White Lead, per ton (In not less than 5 cwt. casks).	54 0 0
Red Lead, Dry ..... per ton	56 0 0
Best Linseed Oil Putty ..... per cwt.	0 12 6
Stockholm Tar ..... per barrel	4 5 0
Filocol ..... per cwt.	0 9 6

Genuine White Lead Paint—
"Blackfriars," "Nine Elms," "Park," and other best brands (in 14 lb. tins) not less than 5 cwt. lots .. per ton delivered 68 0 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 6
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 6
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 6
Superfine Pale Elastic Carriage	0 16 6
Fine Pale Maple	0 10 6
Finest Pale Durable Copal	0 18 6
Extra Pale French Oil	1 1 0
Eggshell Flating Varnish	0 18 6
White Pale Enamel	1 4 6
Extra Pale Paper	0 12 6
Best Japan Gold Size	0 10 6
Best Black Japan	0 16 6
Oak and Mahogany Stain	0 9 6
Brunswick Black	0 8 6
Berlin Black	0 16 6
Knotting	0 10 6
French and Brush Polish	0 10 0

PATENTS.

APPLICATIONS PUBLISHED.*

101,866.—O. V. Cardell: Radiators composed of ribbed pipes.

102,073.—Charles Webster Goodall: Transporter trucks.

102,074.—John Falconer Kebbell: Folding boxes or holders for the storage and transport of fragile articles.

102,106.—Frank Pardee: Spiral separators.

102,114.—Albert Edgar Alexander (The Duratex Co.): Material adapted for use in the manufacture of imitation leather, and the method of making such material.

102,163.—B. Welbourn and British Insulated and Helsby Cables, Ltd.—Electric street pillar-boxes and similar electrical erections.

102,169.—P. L. Hochon and N. Gjorgjevitch: Transportable power winches.

102,182.—D. S. G. Dubash: Stain-preventing trays for use on tables, counters, and the like.

102,220.—F. G. Thompson: Method of and apparatus for cutting sections or pieces out of boards or blocks.

102,229.—G. N. Hall: Screw-cutting taps.

102,235.—G. D. Innes: Domestic fire-grates.

12,139 of 1915.—Edward Charles Robert Marks (Steel Utilities Inc., U.S.): Machines for punching structural shapes.

15,926 of 1915.—William Edgar Muntz: Taps or cocks.

15,936 of 1915.—William Joun Gray: Retaining devices for hinged or folding members.

15,988 of 1915.—Frank Burgess: Wall and floor surfacing composition and process.

16,056 of 1915.—Edward Charles Robert Marks (C. Bancken): Lightning arresters.

16,076 of 1915.—James Rayney Leach Allott and Ernest Dean: Safety sustaining gear for inclined rope railways and the like.

16,099 of 1915.—Charles William Stamper; Truck for loading and unloading motor-lorries and other vehicles.

16,538 of 1915.—Edward Charles Robert Marks (A/S De Forende Norske Laase-og Beslagfabriker, Norway): Door locks or latches.

* All these Applications are now in the stage in which opposition to the grant of Patents upon them can be made.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 2 p.m. on Wednesday.*

* Denotes *accepted.* † Denotes *provisionally accepted.*

BARNSLEY.—For colour-washing interior of Agnes-road School for the E.C.:—
* T. L. Stephenson & Sons..... £179

BRIGHOUSE.—For redecoration of St. James' School, for the Education Committee and Managers:—
* Sugden & Gledhill..... £63

KENDAL.—Supply of 15 tons of cast iron pipes for the Corporation:—
* W. Middleton..... £7 13 9 per ton.

LONDON.—For sewerage and drainage (minor works) for twelve months, for the Westminster City Council: ‡ J. Mowlem & Co., Ltd.

LONDON.—For supply to the Westminster City Council of twelve cast-iron upright ballast bins. ‡ J. Gibb & Co., Ltd., £5 19s. 6d. each.

LONDON.—For the provision of new parts for the engine proposed to be transferred from the Whitewebbs station, Northern district, to the Shortlands station, Kent district, for the Metropolitan Water Board:—
‡ James Simpson & Co., Ltd... £1,285 0 0

‡ *Recommended for acceptance.*

LONDON.—Supply of 250 gallon patent tar spraying machine for the Bethnal Green B.C.
* Llewellins & James, Ltd. Bristol £98 3 6

MAIDSTONE.—For erecting a retaining wall in Busbridge's-road, East Farleigh, for the Maidstone R.D.C.:—
* T. H. Miller..... £36 10

PRESTON.—Alterations at Bostocks Farm, for the Corporation:—
* T. Croft & Sons..... £67

SYDNEY.—Supply to Municipal Council of steam and water pipes:—
* Willans & Robinson, Rugby £347

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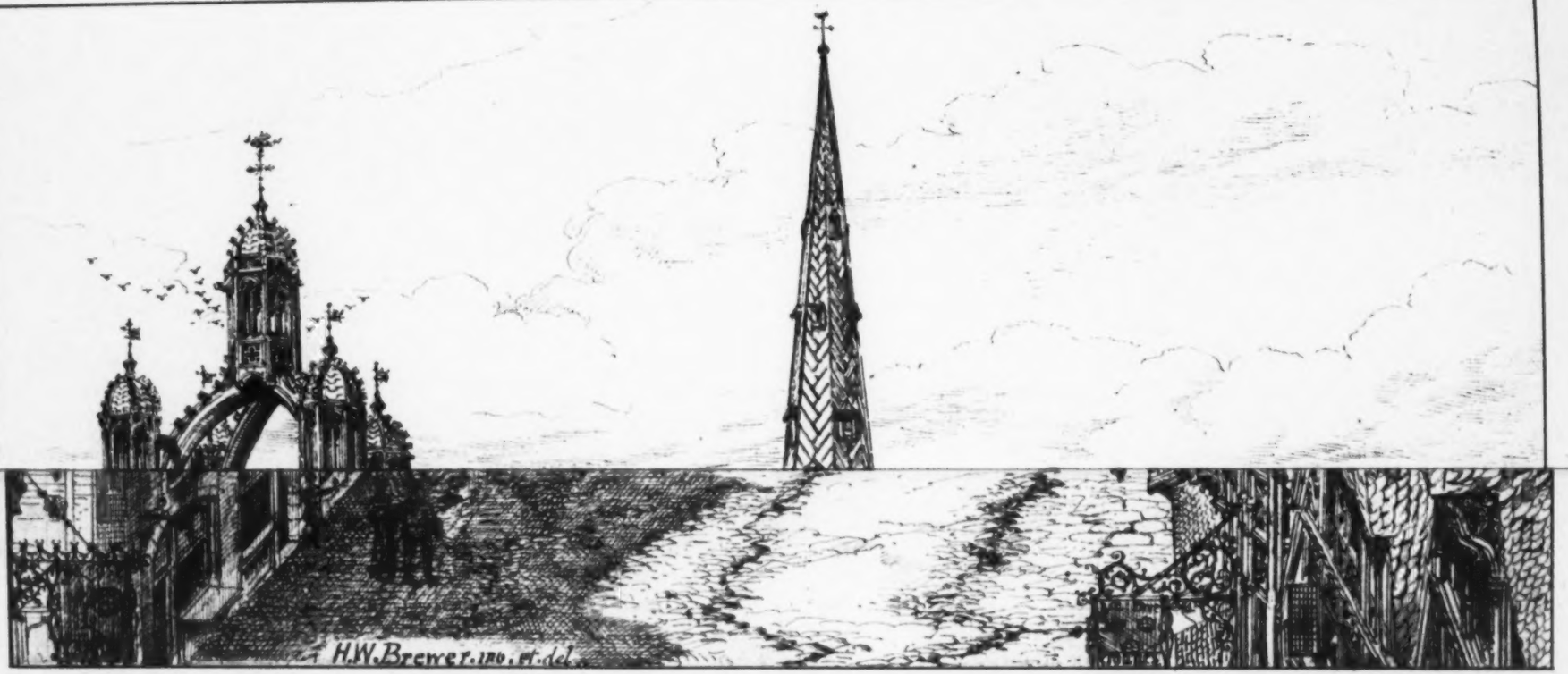
"THE BUILDER" CALENDAR 1917

"THE BUILDER" CALENDAR 1917.



CHEAPSIDE IN THE TIME OF HENRY VIII.

This view, which is reproduced from a drawing by the late H. W. Brewer, shows Old St. Paul's and Bow Church. Between them was Goldsmiths Row, a group of timber-framed houses erected in 1491, and opposite these the "Standard," a portion of which formed a fountain. A little further East was a building of stone called the "Crown Sild" or "Sildam," from which Kings and Royal Visitors used to watch the processions in Cheapside.

January

S	M	T	W	Th	F	S
...	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	...	...	...

February

S	M	T	W	Th	F	S
...	...	...	...	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	...	...	...

March

S	M	T	W	Th	F	S
...	...	...	...	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

April

S	M	T	W	Th	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	...	...	...	...	...

May

S	M	T	W	Th	F	S
...	...	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	...	...

June

S	M	T	W	Th	F	S
...	...	...	...	...	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

July

S	M	T	W	Th	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	...	...	...	...
...	...	...	...	...	...	...

August

S	M	T	W	Th	F	S
...	...	...	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	...
...	...	...	...	...	...	...

September

S	M	T	W	Th	F	S
...	...	...	...	...	...	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	...	...	...	...	...	...

October

S	M	T	W	Th	F	S
...	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	...	...	...
...	...	...	...	...	...	...

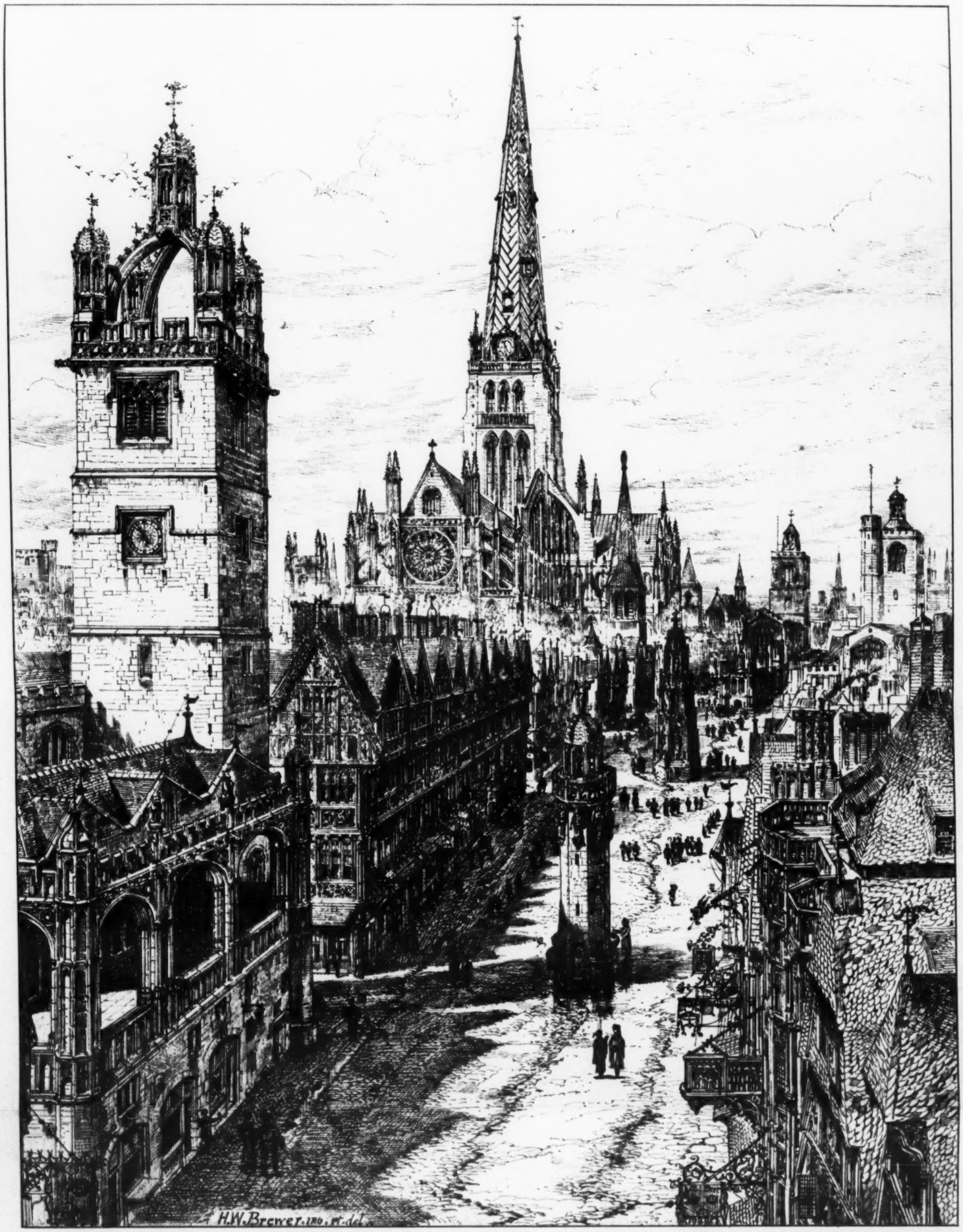
November

S	M	T	W	Th	F	S
..	...	...	...	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	...
...	...	...	...	...	...	...

December

S	M	T	W	Th	F	S
...	...	...	...	...	..	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	...	...	...	...	...

"THE BUILDER" CALENDAR 1917.



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January

S	M	T	W	Th	F	S
...	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	...	...	...

February

S	M	T	W	Th	F	S
...	...	...	...	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	...	...	...

March

S	M	T	W	Th	F	S
...	...	...	...	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

April

S	M	T	W	Th	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	...	...	...	...	...

May

S	M	T	W	Th	F	S
...	...	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	...	...

June

S	M	T	W	Th	F	S
...	...	...	...	...	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

July

S	M	T	W	Th	F	S
[illegible]	2	3	4	5	6	7
[illegible]	9	10	11	12	13	14
[illegible]	16	17	18	19	20	21
[illegible]	23	24	25	26	27	28
[illegible]	30	31	...	...	...	...
...	...	...	...	...	...	...

August

S	M	T	W	Th	F	S
...	...	...	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	...
...	...	...	...	...	...	...

September

S	M	T	W	Th	F	S
...	...	...	...	...	...	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	...	...	...	...	...	...

October

S	M	T	W	Th	F	S
...	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	...	...	...
...	...	...	...	...	...	...

November

S	M	T	W	Th	F	S
.	...	...	...	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	...
...	...	...	...	...	...	...

December

S	M	T	W	Th	F	S
...	...	...	...	...	.	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]